

MANUFACTURERS RECORD

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Business Interests of the South and Southwest

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The Armor Plate Board,
Headed by Admiral George
Dewey, Practically Endorses
Every Argument Made by the
Manufacturers Record as to
the Location of the New Armor
Plate Plant.

BALTIMORE, DECEMBER 14, 1916

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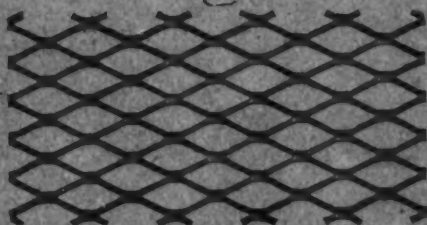
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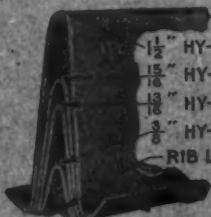
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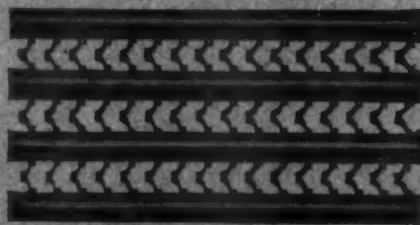
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MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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(Copy.)

Greensboro, N. C., December 9.

Honorable Woodrow Wilson, President,
Washington, D. C.

Please permit me to extend my heartiest commendation on your note in behalf of suffering Belgium. May you be given the wisdom and the strength from on High to save Belgium from enslavement and thus help to save civilization.

RICHARD H. EDMONDS,
Editor Manufacturers Record.

NO ARGUMENT.

THE wage increases being made in different sections of the country and in various lines of industry are respectfully commended to the thoughtful consideration of the members of the American Protective Tariff League and the Home Market Club, who have long insisted that a Democratic tariff could possibly have no other effect than to bring American labor to the verge of ruin and starvation.—Norfolk Virginian-Pilot.

But to argue as the Virginian-Pilot does, in the light of a world war which has completely shut off imports from Germany and which is flooding our country with orders from the Allies for iron and steel and munitions, regardless of price, shows how little such free-trade papers care for facts so that they can make an imaginary point against protection.

HIGHEST PRICE STOCK IN AMERICA.

IT has been generally supposed that the Union Sulphur Company of Louisiana was paying dividends at the rate of 1200 per cent. per year, but the Boston News Bureau is quoted as reporting the dividend of the company at the rate of 2250 per cent. per year. Under these circumstances, it is not surprising that \$11,500 per share is the bid price in New York, and that even at these figures nobody seems to be disposed to sell.

A WARNING VOICE FROM TEXAS.

[Waco (Tex.) Times-Herald.]

THE Child-Labor Act was the beginning of a series of acts which will take from organized labor the voluntary principle. The Times-Herald sees in all such legislation a long step toward autocratic government, the foe of liberty. We should watch the beginnings; it is too late to check the flood after the dam breaks.

A Call to the Nation to Prepare for the Future.

THE MANUFACTURERS RECORD is not an alarmist, but we do not believe it is possible for any intelligent man to study the world's situation without becoming seriously concerned as to the dangers which we shall inevitably have to face within the next few years. The magnitude of these dangers cannot be overstated.

We face a world in arms, and a world largely hostile to us, because when the war is over it will be a world of poverty so far as Europe is concerned, with vast armies and navies looking across the waters, which no longer separate but really unite us and increase our dangers, to a country literally smothering beneath the fatness of its wealth, to a country which already has about one-third of the accumulated wealth of the world.

We are fattening on the blood of Europe.

We are becoming, as has been said, "drunk with unearned prosperity."

We are eagerly selling to Europe billions of dollars' worth of foodstuffs and war munitions in order to enable the Allies to carry on their fight for civilization.

We are selling these things at very high prices, yielding to the producers of the foodstuffs and the cotton and the iron and steel and war munitions enormous profits, and Europe keeps on bidding higher and higher all the time, as against our domestic consumption, in order to make sure of getting the supplies. Europe is thus draining itself to enrich us, not because it desires to enrich us, but because its possible salvation can come only through buying heavily from us.

It is beyond the power of the human mind to look into the future of the European situation. We believe that the Allies will continue united on to the end, and that, though it may be some years yet through which they shall have to bear the awful burden now resting on them, they will ultimately win; but before the end of the war, or when the war is over, many new alliances may perchance be made. Some who are fighting each other today may even be lined up against some of their allies of this hour.

We do not know what is to happen in Europe in the way of new national alliances following the war, nor is it possible for us to predict what may come about in the Orient. We do know, however, that the world is being turned into a vast munition factory and its shipyards into hives of industry for the production of ships of war, from the great battleship to the under-sea craft.

England alone has four thousand munition factories at work. It is said that all Japan is practically a munition factory, while Russia, with 10,000,000 to 12,000,000 soldiers under arms, is dependent almost wholly on the United States and Japan for its war supplies. Mighty as Russia is in area and in population and in material resources, it has been largely an agricultural country, and now it is too busy training soldiers to be able to develop iron and

steel and munition industries in keeping with its needs.

With the whole world thus in arms or engaged in the production of battleships and war supplies while we have been arousing the jealousy and the envy and the cupidity of many who look upon our enormous resources and wealth as a means by which they could easily recoup their financial losses, we would be blind indeed if we failed to realize our danger.

A goose waddling around in its own fatness surrounded by starved wolves would be just as safe as we shall be when the European war is over if we have not by that time protected ourselves by an adequate army and navy. Some of our people are disturbed over the cost of such preparation, ignoring the fact that as insurance on property and on human lives is a wise investment, so insurance of national life and destruction is wise.

We are accumulating wealth at the rate of about ten to twelve billion dollars a year, and yet we are worrying over the expenditures needed for the building of an adequate navy and the organization of an army commensurate with our wealth, our population and our dangers.

We do not believe it is possible to safeguard the future in any other way than through universal compulsory military training. The system of depending upon volunteers is false from every point of view. It is unfair to the patriotic man who offers his life for the safety of the nation while others, who should be equally as patriotic, shirk their duty and continue in business, enjoying all the comforts of home, letting the other men fight their battles for them and their families. This voluntary system is wholly unjust to the patriotic volunteer and it is unjust to the shirker, or as he has come to be known in England, the "slacker," because when men will not voluntarily do their duty to their country they should be compelled to do so and in the doing of it learn the responsibility of honor and manhood.

The work of universal military training should not be postponed a single day beyond the time necessary to pass a bill through Congress for its establishment. If we are ever to have real war dangers, they are more likely to come within the next two or three years than at any time in the future beyond that period.

The time may come when the world will cease from war, but there is no sign of it at present. The war god is rampant.

The struggle of civilization against barbarism, of democracy against autocracy, is on, and on to the finish.

Shortly before the election President Wilson wisely stated that this was the last great world war in which the United States could remain neutral. We think it would have been still wiser if he had said that we cannot possibly remain neutral unto the end of this war, for, however much we may dread the horrors of war and seek to shirk our re-

sponsibilities to humanity, there are forces at work today incomprehensible but vastly more powerful than the will of any human being to control. We cannot shirk our destiny, as much as we may desire to do so. It is true of a nation, as of an individual, that there is a power which shapes our ends, rough hew them as we may.

What is to be the outcome of this awful war, the greatest tragedy in human history except that terrible one upon the Cross of Calvary, when God Himself in the person of His Son died for the sins of men? All else in human history seems triflingly small in contrast with the terrible forces of destruction now at work in Europe.

We have been told by some that we must set an example of peace; that we must show to the world the power of love, the power of a Christian nation living in friendly relations to the world. But we have no more right to take this position as the final answer against preparedness than had France or England or Canada.

From all over the country and from every man whose voice can be heard there should come forth a universal call to the nation to prepare for the future and to save ourselves and civilization and democracy from destruction by being ready to meet any contingencies which may arise. Unless we do this, we may rest assured that so far as human foresight can penetrate the mysteries of the future our danger will be infinitely great and our destruction almost a certainty.

The MANUFACTURERS RECORD utters these solemn words with a due sense of their meaning. It realizes fully that in these statements, which it has for two years been giving to its readers, it has sought to measure the force of its words in the light of the relation of this country to world forces in this time of world cataclysm.

President Wilson and those in authority must realize as they have never done before the dangers which we confront. All economic questions, important as many of them are, sink into insignificance by the side of this situation of overwhelming danger and of the necessity of immediate preparedness by the adoption of Universal Military Training and the building, as rapidly as men and money can make possible, of a navy great enough to be our first line of defense.

To President Wilson and his advisers, under such conditions, should be given, and surely will be given, the heartiest co-operation of every right-thinking man, regardless of party affiliations. No man, perhaps, so far as the world's civilization and human welfare is concerned, who ever sat in the Presidential chair of this country has had resting upon him such responsibilities to the whole world as President Wilson now faces.

It behooves the people of this country to take thought of these things in this hour when crowded with the rush of business, centering our thoughts upon our own petty individual affairs, as to whether we are paying too much or too little for foodstuff, according to whether we are the consumer or the purchaser. The world pressure is on us to broaden our views, to look out on the world horizon and think larger thoughts and stand for larger things than individual comfort or individual wealth.

EXPORTS OF A FEW WAR MATERIALS.

THE declaration of special dividends by the Du Pont Company, which bring the aggregate for the year to 100 per cent., is easily understood when it is seen from the report of the Department of Commerce that for the first nine months of 1916 the total

exports of explosives amounted to \$532,732,527, as compared with \$4,878,635 for the corresponding months of 1914.

While this increase in explosives is far and away the largest increase in any line of munition industry, it is to a considerable extent typical of the increase in exports of things intended for war purposes. The shipment of iron and steel and manufactures thereof (and the increase in these exports is, of course, due wholly to war) amount for the first nine months of the year to \$619,853,667, as compared with \$152,776,838 in the corresponding period of 1914.

The value of the exports of a few of the leading articles intended for war purposes for the nine months ending September, 1914, 1915 and 1916 was as follows:

VALUE OF EXPORTS OF CERTAIN ARTICLES FOR NINE MONTHS ENDING SEPT., 1914, 1915 AND 1916.			
Article.	1914.	1915.	1916.
Automobiles and other vehicles and parts of.....	\$27,738,088	\$101,522,230	\$103,742,346
Cars for railways and parts of.....	4,461,630	2,955,778	21,443,200
Breadstuffs.....	172,843,149	423,361,004	337,761,496
Chemicals, acids, drugs.....	20,207,088	54,056,065	121,068,770
Copper and manufactures of, except ore, etc.....	95,559,568	83,911,345	168,830,257
Explosives.....	4,878,635	84,297,363	532,732,527
Iron and steel and manufactures of.....	152,776,838	251,220,008	619,853,667
Leather and tanned skins and manufactures of.....	39,069,936	124,389,793	115,414,646
Mineral oils.....	108,246,515	106,250,571	155,229,698
Wearing apparel, wool and manufactures of.....	3,522,628	25,242,942	34,955,181
Zinc and manufactures of, except ore.....	3,202,142	21,528,347	41,449,021
Total	\$632,506,217	\$1,278,735,446	\$2,252,471,055
All other.....	807,569,722	1,210,619,943	1,654,235,380
Total value of all domestic merchandise exports.....	\$1,440,075,939	\$2,489,355,389	\$3,906,706,435

These articles do not, of course, by any means include all gains in exports due to the war. They do not include the heavy shipments of horses and mules, nor dozens of other things where the increase has been due to the war. But these eleven articles show an increase from the first nine months of 1914 of \$632,506,217 to \$2,252,471,055 for the first nine months of 1916, a gain of \$1,620,000,000. This is suggestive of the vast increase in the exports of war materials, but it does not by any means include all the increase due to the war.

In connection with the value of the exports of the eleven articles in the preceding list, it is interesting to note the increase in the value of exports to the Allies and their colonies for the ten months ended October, 1916, as compared with the corresponding time of 1915. These figures, just issued by the Department of Commerce, are as follows:

Countries.	Ten months ended Oct., 1916.	1915.	Increase 1916.
Belgium	\$22,370,429	\$18,291,847	\$4,078,582
France	710,400,312	402,625,558	307,774,754
Italy	229,952,692	221,251,405	8,701,287
Russia in Europe.....	249,093,181	85,749,378	163,343,803
United Kingdom.....	1,557,221,430	968,254,599	588,966,831
Canada	482,489,376	276,452,463	206,036,913
British East Indies.....	23,351,548	16,850,645	6,500,903
Japan	81,003,567	36,323,879	44,679,688
Russia in Asia.....	132,378,375	29,597,827	102,780,548
Australia and New Zealand	68,523,364	53,518,053	15,005,311
British Africa.....	25,729,145	19,659,562	6,069,583
Total	\$3,582,513,419	\$2,128,575,216	\$1,453,938,203
Total of all exports.....	\$4,443,326,271	\$2,867,694,132	\$1,575,632,139

The total increase in all exports from the United States for the ten months ended October, 1916, was \$1,576,000,000. Of this \$1,453,000,000 was due to the increased exports to the Allies and their colonies, the total increase to all other countries being only \$121,000,000.

These figures are of striking interest in connection with the exports of war materials as showing how our foreign trade, which has brought about present prosperity, is due to the demand on this country from the Allies for war materials. It is important that these facts should be studied in order to form some conclusions as to our foreign trade after the war. At that time there will be a let-up in war-munition shipments, but after six months or a year the rebuilding activities of Europe may cause a continuation of heavy exports of iron, steel, lumber, cotton and naval stores which may largely offset the decrease in munitions.

OVER \$2,000,000,000 FOR COTTON AND COTTON PRODUCTS THIS YEAR.

THE December report of the Department of Agriculture puts the average price of cotton paid the farmers as of December first, at 19.6 cents a pound, at which price the year's crop would be worth \$1,079,351,616, exclusive of the value of lint cotton and seed. Based on an estimate recently issued by the Department as to the average selling price of seed this year, the value of the seed will exceed \$250,000,000, which would make the total for the crop, including seed and linters, considerably in excess of \$1,350,000,000. About 3,000,000 bales of cot-

ton were brought over from previous crops. Possibly the amount will exceed these figures, as a large quantity of cotton has been carried by farmers for several years. On this basis, however, the total value of this year's crop and of the crop brought over from last year would be over \$1,600,000,000.

These figures more than sustain the estimates made by the MANUFACTURERS RECORD a month or more ago as to the value of this year's cotton crop. The value added to the cotton which will be manufactured in Southern cotton mills and the value of the output of Southern cotton seed oil mills will make the total income to the South from cotton during this crop season considerably larger than \$2,000,000,000.

In view of the fact that this year's crop, following a short crop of last year, gives a supply very much less than the world's consumptive requirements, it is not surprising that prices have reached such high figures and despite temporary fluctuations in the speculative market we can see no reason why very full figures should not prevail through the balance of the crop year and likewise through the coming year, unless we should have a phenomenally good yield in 1917, and this hardly seems possible in view of the fertilizer situation and the scarcity of labor.

While the South may therefore expect a large price for cotton it would be a fatal mistake of this section not to give increased attention during the coming year to the production of food stuffs. Nothing but bumper grain crops next year can prevent this country from facing almost a food-famine condition, with prices of foodstuffs far beyond present figures.

SPIRIT OF ENTERPRISE SHOWN IN AN ADVERTISEMENT.

THE offering of a manufacturing site by the Mercantile Trust Co. at St. Louis, which appears in the advertising columns of the MANUFACTURERS RECORD this week, is notable for its departure from the stereotyped form in which real-estate advertisements are generally written. Not only is the property well described and intelligently diagrammed, but some interesting facts about St. Louis are presented to give the prospective purchaser an idea of why it would be to his advantage to secure a manufacturing site in St. Louis. In this respect the offering of a piece of property becomes an advertisement of the city itself. A degree of progressiveness on the part of the Mercantile Trust Co. is thus indicated which is deserving of commendation and can be emulated to advantage by others who have real-estate offerings to present.

The Armor Plate Board, Headed by Admiral George Dewey, Practically Endorses Every Argument Made by the Manufacturers Record as to the Location of the Armor Plate Plant.

THE fight made by the MANUFACTURERS RECORD for the location of the \$11,000,000 Government armor-plate plant in the interior of the United States has been won.

The special board appointed to consider the question of a site has recommended that coastal and border areas be entirely eliminated from consideration for military reasons.

In making this recommendation the board names the following cities as offering localities that are comparatively safe in time of war:

Birmingham, Tuscaloosa and Gadsden, Ala.; Lomax, Cairo and Metropolis, Ill.; Evansville and Rockport, Ind.; Keokuk, Iowa; Charleston and Huntington, W. Va.; Louisville and Middlesboro, Ky.; Tulsa and Muskogee, Okla.; Elizabethton, Bristol, Chattanooga, Kingsport and Knoxville, Tenn., and Gilmer, Tex.

These cities will be visited by another special board appointed by Secretary Daniels to study matters of freight rates, transportation facilities and other economic features. The final selection of the site will be delayed pending the report of this special board.

That the MANUFACTURERS RECORD should feel a distinctive sense of victory in the conclusion that has been reached with regard to the prospective location of the Government's armor-plate plant is not only pardonable, but justifiable. It was the first to make the suggestion of an interior location for this plant, and in the face of powerful opposition from outside interests it has fought early and late in this cause of the country's welfare. Its presentations of the dangers that would result from the locating of the plant where it would be at the mercy of an invading force were too sound to admit of rejection. The danger of complete dependence on the supply of Lake Superior ores, which could be cut off at any moment, was pointed out. The fight for national preparedness and true national defense in this particular was carried on by the MANUFACTURERS RECORD with the most impartial intent. There was no effort made to name any particular place or section for the site. The strategic and economic features involved in the proposition were the sole considerations. Impregnability called for an interior location, with a mountain range to safeguard against invasion, and the presence of coal and iron deposits were the logical requisites. Every argument advanced by the MANUFACTURERS RECORD during the long fight was submitted in detail to Secretary Daniels and every member of the board.

These arguments were simply a presentation of actual facts from which there could be no appeal by any unprejudiced mind, but these facts had never before been put before the country. At the beginning of the campaign Philadelphia confidently expected to secure this plant if its construction should be authorized, and Baltimore, Richmond and other seaboard places eagerly contended for it. But to have selected any one of these places would have been a monumental blunder.

The range of territory comprised in the recommendations of the special board is even more re-

stricted than the MANUFACTURERS RECORD held necessary. But this fact will only tend to confirm the belief that the considerations so urgently pressed by the MANUFACTURERS RECORD carried conviction to the point where the highest dictates of prudence and wisdom obtained full sway in the minds of the board.

Now that the board originally selected has performed so admirably and patriotically the duties assigned to it, the MANUFACTURERS RECORD urges the earliest possible selection of the site by the special board to which this duty has been entrusted. No feature of national preparedness now under consideration is of greater importance than this. Having gone thus far in a manner that must appeal to every unbiased person as deserving of the greatest praise, the country is justified in asking that lessons taught by a ruthless war be turned to practical account, and that this step so necessary to prevent it from ever meeting the fate that has befallen so much of Europe be taken without loss of time.

While a special committee of the General Board of the Navy made the report eliminating all contenders except those in the interior, the report has all the force of a final Governmental decision. It can be stated definitely that Secretary Daniels has given his approval to the report submitted by Admiral Dewey as head of the General Board. All that remains to be done now is to select one of the sites available in the interior.

The manner in which the decision was reached is shown by the following official copy of the letter of the Secretary of the Navy to the General Board, dated November 24, 1916:

There is transmitted herewith a summary of all the briefs submitted to the Department from the various cities of the country in connection with the location of the Government armor plant. The cities in the summary are arranged by States. Should the General Board desire any or all of the briefs, as submitted, they are at the Board's disposal.

An examination of the list of cities that have shown an interest in the location of the armor plant indicates that they naturally divide themselves into four classes:

(a) Those with direct transportation to the coast, including Beaumont, Texas; Mobile, Ala.; Brunswick and Savannah, Ga.; Fayetteville, N. C.; Hampton Roads and Richmond and vicinity; Baltimore, Md.; Washington and vicinity; Philadelphia, Pa., and New York and vicinity.

(b) Cities on the Great Lakes, from Buffalo to Duluth, including practically every city of any size on the lake front.

(c) Those cities in close proximity to the coal fields, including Birmingham, Tuscaloosa and Gadsden, Ala.; Chattanooga, Knoxville, Bristol and Elizabethton, Tenn.; Roanoke and Buena Vista, Va.; Middlesboro and Ashland, Ky.; Charleston and Huntington, Moundville and Wheeling, W. Va.; Steubenville, Ohio, and Pittsburgh, Pa.

(d) Cities along the Ohio River, from Pittsburgh to Cairo. These cities, although some of them are not in close proximity to the coal fields, have a very cheap water transportation for coal.

The attention of the General Board is invited to the fact that an armor plant to produce 20,000 tons of armor will require 30,000 tons of pig iron annually, and about 300,000 tons of coal, or the equivalent in gas or oil.

The Department desires from the General Board a report showing a list of cities contained in the summary transmitted herewith that will satisfy the provisions in the Act of Congress appropriating for the armor plant, as follows:

"to be located at a place or places approved by the General Board of the Navy, with especial reference to considerations of safety in time of war."

JOSEPHUS DANIELS,
Secretary of the Navy.

The official copy of the report of the General Board, signed by Admiral Dewey, was as follows:

In submitting the following report showing the list of cities contained in the summary transmitted to the General Board by the Department "which will satisfy the provisions in the Act of Congress appropriating for the armor plant" in so far as location is concerned "with especial reference to considerations of safety in time of war," the General Board has been guided by the military principle which was laid down by the Army War College on September 11, 1915, and with which it is in full accord, viz.:

As a general military principle, no supply depot, arsenal nor manufacturing plant of any considerable size, supported by War Department appropriations for military purposes, should be established or maintained east of the Appalachian mountains, west of the Cascade or Sierra Nevada mountains, nor within 200 miles of our Canadian or Mexican borders, and steps should be taken gradually to cause to be moved depots and manufacturing plants already established in violation of this military principle.

The adoption of this general principle eliminated all the cities located in the New England States, New York, Pennsylvania, New Jersey, Delaware, Maryland, District of Columbia and all such cities of Virginia, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Louisiana and Texas within 200 miles of the coasts, and the cities in Michigan, Wisconsin, Illinois, Indiana and Ohio situated within 200 miles of the Great Lakes, which serve as a boundary between the United States and Canada.

The following cities do not fall within the prescribed area, and their distance from the borders of the country, or their location beyond mountain ranges, where our army probably would be able to check the advance of a hostile force, render them comparatively safe in time of war:

Birmingham, Tuscaloosa and Gadsden, Ala.; Rome, Georgia; Lomax, Cairo and Metropolis, Illinois; Evansville and Rockport, Indiana; Keokuk, Iowa; Louisville and Middlesboro, Ky.; Tulsa and Muskogee, Okla.; Elizabethton, Bristol, Chattanooga, Kingsport and Knoxville, Tenn.; Charleston and Huntington, W. Va.; Gilmer (Ore City), Texas.

The principal requirements for the site of an armor-plate plant, as prescribed by the Bureau of Ordnance on June 28, 1913, are:

- 1st—Geological character of site.
- 2nd—Facilities for securing raw material.
- 3rd—The labor market.
- 4th—Facilities for delivering completed material.

There are industrial and economic questions which should be determined upon investigation by a board of technical experts. It is recommended that such investigation be conducted before final decision is reached.

GEORGE DEWEY.

Thus, despite the tremendous fight made against the position taken by the MANUFACTURERS RECORD, the board headed by Admiral Dewey has to the very utmost extent sustained our position and indicated the vital importance of establishing in the interior plants for munition-making and all war material purposes, of which the armor-plate plant is merely the forerunner.

And now if the independent iron and steel and munition making interests fail to heed the lesson and refuse to build such plants in the interior, away from the coast and from dependence upon Lake ores, the Government will in self-defense be compelled to establish such plants just as it proposes to do in the armor plate move.

THE NATION'S RESPONSIBILITY IN THIS WORLD CATAclysm TO SUCCOR THE PERISHING.

IN his address before the Southern Commercial Congress now in session at Norfolk, John Skelton Williams, comptroller of currency, warned his audience that this country must prepare to defend itself from aggression and that it must be ready to lend the great wealth it has piled up at the war's expense to the rehabilitating of Europe and to the financing of the world. The succor given by this country to the needy of the nations at war, said Mr. Williams, has been niggardly, and our efforts to maintain neutrality and to enforce the laws of nations have earned for us the enmity of most of the warring nations.

The latter statement, in regard to neutrality and to the enmity of the countries at war, is in direct line with the position which the MANUFACTURERS RECORD has repeatedly taken. This fact cannot be emphasized too strongly. We are glad that Mr. Williams brought it out so forcibly, and that it has been sent by the Associated Press to all leading daily papers of the land that all our people may read it.

We have sold to Europe billions of dollars' worth of foodstuffs and munitions of war, and in doing so have materially helped the Allies in their fight, but we have sold these things at enormous profit to ourselves. The Allies, while fully recognizing the importance of the things which they have bought from us, also recognize that we have carried on this trade not so much from a desire to help them in their fight for civilization as for the purpose of making money at their expense.

We have at the same time proudly boasted that we proposed to capture the neutral trade of the world, the trade upon which the very existence of some of the Allies' great commercial power depends. We shall not be able to take from them as much neutral trade as we are anticipating, but while they are engaged in a life-and-death struggle, which is as vitally important to us as them, for all civilization is at stake, and if they should lose, our turn would come next, we are boasting that we propose to take their trade from them. We are growing enormously rich and accumulating the world's wealth by the billions that they are pouring into this country, and at the same time we are bragging of our ability to prevent their ever regaining their trade. We are indeed almost stabbing the Allies in the back, or threatening to do so, when we make such a proud boast, which, fortunately for the best interests of the world, we cannot make good.

We have, of course, aroused the hostility of Germany and its allies, and in this case we may well be proud of the enemies we have made, for so long as Germany represents barbarism in its ruthless warfare so long should this nation be opposed to all that Germany stands for in the present war.

Mr. Williams was also correct in his statement that we have given niggardly to the needy in the nations at war. All Europe is a house of mourning. Sorrow and suffering such as the angels of Heaven never looked down upon before rest like a mighty pall of darkness over Europe. Poverty and woe, physical and mental suffering, beyond anything that the world has ever had or ever conceived as possible, exist. Millions of widows and orphans are dying of starvation and the bitterness of cold and blizzards. Our country has given largely, when looked at from one point of view, to aid the sufferers, but when we measure this by our ability and our wealth, which has come to us from Europe's suffering, we have indeed been niggardly.

The MANUFACTURERS RECORD believes that this Government could well afford to give, as no other government in the world has ever been called upon

to give, to aid the sufferers of Europe. It is not enough to depend upon the charity of individuals, for the Government, in its official capacity, might justly, we believe, win the approval of the people of this land by voting an appropriation commensurate with our boundless wealth and with the infinite responsibility which rests upon us in such a world crisis. Unless the Government should give by the hundreds of millions it would be a mistake for it to give at all. As a country we are too great and too rich to be niggardly by any small gift by the Government to the world-suffering. We might well afford to spend a billion dollars in a cause so worthy, and then call upon every individual and every business organization in the country to give and give until the giving is felt in real sacrifice, to aid these millions and millions of suffering and dying people in Europe.

THE MONROE DOCTRINE IN ITS BROADER ASPECTS.

NOT a few hints have been thrown out from time to time that the integrity of the Monroe Doctrine has been preserved rather through the mutual jealousies of European nations than because of their individual inclination to observe its terms or the power of this country to enforce them should the foreign jealousies become abated or one or the other of the great powers obtain such world dominance as to be able to brave the United States on this issue.

That such view of the situation naturally argues for the highest form of preparedness on the part of the United States has so far been recognized by the so-called pacifists as to lead them to deny the existence of any such curbing influences, and to attribute to those who claim to see them an intent to manufacture an argument out of a condition that does not really exist.

At this point, however, the London Morning Post comes forward with a statement that, if accepted, converts these views into facts. "At any time in the last ten years," says the Post, "we could have had an agreement with Germany by allowing her a free hand across the Atlantic." The further charge is made that in the course of the present war Germany has put forward, "of course, discreetly and unofficially," the same proposal, which the Allies have rejected.

Naturally the Post had reference to a free hand in Central and South America for colonization by Germany. Whether or not the statements are to be accepted, the need of Germany for expansion is recognized. There is no longer any part of the world open except the sparsely settled countries of those portions of the Western Hemisphere just mentioned. And the New York Times, in commenting on the statement by the London Post, expresses the opinion that the passing over of South America in the game of grabbing continents is not due to oversight.

While no definite proof of the interference by one European nation with another in its plans for land grabbing in this hemisphere can be found in executive messages or diplomatic notes, the fact that such mutual antagonisms are present has frequently been adverted to, as, in fact, their existence is too well known to admit of denial.

The perpetuation of Ottoman power in Europe, for example, is not due to any love of any European nation for the Turk, or any respect on their part for any national rights Turkey might be considered to have. The suggestion, therefore, that Germany may have been opposed in her desires for national aggrandizement on the western continent is alto-

gether conceivable without arguing any particular respect of the Allies for the Monroe Doctrine.

Proof of this lack of profound respect for the American idea set forth in the Monroe Doctrine on the part of Great Britain is made manifest in the circumstances attending the adjustment of the Venezuelan Boundary Dispute in Cleveland's administration. In his special message of December 17, 1895, President Cleveland called attention to the answer of the British Government to the request on the part of this Government that the dispute be submitted to arbitration. In the reply, he points out that Great Britain insisted that "in the present instance a new and strange extension and development" of the doctrine had been insisted upon by the United States, and that we should not seek to apply the Monroe Doctrine to the pending dispute because it does not embody any principle of international law which "is founded on the general consent of nations," and that "no statesman, however eminent, and no nation, however powerful, are competent to insert into the code of international law a novel principle which was never recognized before, and which has not since been accepted by the Government of any other country."

Insisting in his message that the Monroe Doctrine "was intended to apply to every stage of our national life, and cannot become obsolete while our Republic endures," President Cleveland added: "If the balance of power is justly a cause for jealous anxiety among the governments of the Old World, and a subject for our absolute non-interference, none the less is an observance of the Monroe Doctrine of vital concern to our people and their Government."

That German influence may have been operative in enabling President Cleveland to force Great Britain into acquiescence with our demands for arbitration in the Venezuelan Boundary Dispute becomes possible. That nation had large interests in Venezuela at the time, and the additional motives that would have led Germany to exert her influence in behalf of our contentions are precisely the same now operative in the refusal of the Allies to let Germany have a "freehand across the Atlantic," in the event that such proposal was made and rejected.

The only logical conclusion obtainable from the statement in the London Post, when taken in conjunction with the passage in history here alluded to, is that none of the European nations have respect for the Monroe Doctrine any farther than to utilize it in thwarting the ambitions of their rivals. That we should depend upon the exigencies of European jealousies for the support of a doctrine "intended to apply to every stage of our national life" is unthinkable. These may fail at any time, and then the relation of the Monroe Doctrine to the question of preparedness will take on even greater importance than any other that can be conceived.

COLD-STORAGE HOLDINGS IN THE COUNTRY.

RECENT bulletins issued by the Office of Markets and Rural Organization, Agricultural Department, Washington, D. C., show an increase this year over last in the cold-storage holdings of frozen and cured meats, but a decrease in the quantity of eggs, creamery butter, American cheese and apples.

In the light of recent investigations of the high price of foodstuffs the following table, which compares the holdings of some of the more prominent products in cold-storage warehouses December 1, 1916, with December 1, 1915, will be read with interest:

Article.	No. of storages reporting.	Dec. 1, 1915.	Dec. 1, 1916.	Per cent. increase.
Frozen beef.....	130	103,326,591 lbs.	115,710,467 lbs.	11.9
Cured beef.....	189	18,802,814 lbs.	31,733,450 lbs.	74.1
Frozen pork.....	98	21,763,562 lbs.	28,608,045 lbs.	31.5
Dry salt pork.....	234	83,414,521 lbs.	121,456,942 lbs.	45.6
Sweet pickled pork.....	289	159,964,693 lbs.	201,881,916 lbs.	33.7
Lard.....	261	34,377,151 lbs.	59,849,457 lbs.	48.9
Frozen lamb and mutton.....	83	4,047,398 lbs.	4,909,222 lbs.	21.8
Frozen meat products not classified.....	14	8,359,204 lbs.	11,217,197 lbs.	34.2
Eggs.....	193	2,787,802 cases	1,794,740 cases	*35.3
Creamery butter.....	189	71,848,767 lbs.	58,627,236 lbs.	*18.4
American cheese.....	203	30,943,632 lbs.	25,754,366 lbs.	*16.8
Apples.....	367	5,411,389 bbls.	3,669,900 bbls.	*32.0

(*) Decrease.

How Foreign Market Conditions After the War May Be Met

PROBLEMS OF GREAT MOMENT TO BUSINESS MEN OF AMERICA TO BE
DISCUSSED AT NATIONAL TRADE CONVENTION IN PITTSBURGH IN
JANUARY—PRESIDENT JAMES A. FARRELL'S CALL.

By ROBERT H. PATCHIN, Secretary National Foreign Trade Council.

A practical business men's conference on the problems arising in American foreign trade and the measures necessary to meet them instead of waiting to wake up too late—that is the purpose of the Fourth National Trade Convention, to be held at Pittsburgh on January 25-27, 1917.

The South is co-operating cordially, just as it did one year ago when the Third National Foreign Trade Convention was held at New Orleans. "Greater Prosperity Through Greater Foreign Trade," the Council's slogan, is now recognized as a national verity. Shrewd business men realize that this refers not only to the present time, when manufacturers are getting their own price for war materials and other products demanded by the war, but doubly applies to those times, sure to come again in the future, when domestic prosperity will not be so abundant, and a foreign policy will be essential to keep factories going. For it is an economic truism that except for world-wide depressions, slack times at home and abroad seldom synchronize.

The convention is called by the National Foreign Trade Council, a non-political and non-partisan board of 50 manufacturers, merchants, bankers, farmers and other producers of natural commodities, railroad and steamship men, who represent all sections of the United States and collectively stand for the general interests of all engaged in foreign trade. Recognizing that foreign trade is a vital element in domestic prosperity affecting the welfare of all citizens, the Council is constantly engaged in investigating and advising on foreign trade problems and the encouragement of sound national foreign trade policies.

The Council will present to the convention a report on "World Trade Conditions After the European War." This will make public the result of a year of research into war changes in European commercial and industrial organization, the industrial reconstruction of devastated areas of Europe and the probable post-bellum competing power of various nations. In this report the Council will offer certain recommendations for national commercial preparedness to meet changed conditions after the war.

W. W. Nichols of the Allis-Chalmers Company, chairman of the American Industrial Commission to France, will speak on "European Reconstruction."

Willard Straight, vice-president of the American International Corporation, will make an address upon the "Foreign Trade Aspect of the Tariff," dealing with methods whereby the tariff, whatever be its underlying principle, may be given adequate resources for the encouragement of foreign trade and its protection from undue discrimination.

Instead of being given over completely to set addresses, however, much of the convention's time will be devoted to "group sessions," at which single topics are informally discussed by all delegates who care to participate and in which the "question and answer method" gives the deliberations a practical quality which hundreds of delegates have testified is rarely attained in conventions.

One of these group sessions will be devoted to an intensive consideration of the problems of a class of American business men, who, the Council feels, it is nationally necessary should be encouraged to enter foreign trade, namely, the smaller manufacturer and merchant. For foreign trade is more vital to our domestic prosperity and general welfare than its value indicates, for the things we import are largely the materials indispensable to our life and industry, and the goods we export represent that surplus of production the prompt and profitable disposition of which renders conditions of employment stable and comfortable to all who labor. This truth applies as forcibly to the small as to the large manufacturer. It is to analyze the perplexities which confront the manufacturer engaged in foreign trade on a small scale, or who contemplates entering it, and to encourage and assist him in solving these

CALL OF FOURTH NATIONAL TRADE CONVENTION.

To Be Held at Pittsburgh, Pa., January
25-27, 1917.

The many problems arising in the foreign trade of the United States merit the earnest consideration of Americans representing all activities related to overseas commerce and all sections of the country. The Convention will consider, among others, the following questions:

"Conditions in Foreign Markets After the War, and the Measures Necessary to Safeguard American Foreign Trade As Well As the Foreign Trade Aspect of the American Tariff System."

"Co-operation in Foreign Trade Development."

"The American Merchant Marine."

"Foreign Investment of American Capital As An Aid to Overseas Commerce."

"Problems of the Smaller Manufacturer and Merchant."

All Americans engaged in or desirous of entering overseas commerce, and particularly all boards of trade, chambers of commerce and other commercial and industrial organizations, are invited to participate, either individually or by appointment of delegates, in a practical and constructive discussion of policies and practices necessary to meet keener competition which the United States may encounter in world markets after the war.

The proceedings will be designed to bring out the mutual interests of the chief elements in foreign trade, namely, manufacturing, agriculture and other natural production, including mining and the lumber industry, merchandising, transportation and banking. In addition to prepared addresses by authorities on topics mentioned, the Convention will be largely given over to "group sessions," each devoted to intensive discussion of a single problem, in which all delegates are at liberty to participate. A number of gentlemen long experienced and successful in foreign trade will act as volunteer trade advisers, and improved facilities will be provided for bringing into conference with them delegates who desire information and advice. The State Department will detail several United States Consuls-Generals to the Convention for purposes of individual consultation, to provide information to delegates, and the Secretary of Commerce has similarly assigned officials from the Bureau of Foreign and Domestic Commerce to duty at Pittsburgh during the Convention.

The Convention will thus offer exceptional opportunities for the individual delegate to obtain information as well as the benefit of the addresses and discussion in the Convention sessions.

Foreign trade is a vital element in domestic prosperity, whether such prosperity be enhanced by war demands or diminished by lack of foreign orders in peace. The constructive encouragement of sound national foreign trade policy will be the purpose of the Convention, in which the co-operation of all elements engaged in or affected by foreign trade is invited and will be welcomed.

JAMES A. FARRELL,

Chairman National Foreign Trade Council.

problems, that this "group session" is held in co-operation with the Manufacturers' Export Association. In addition, an entire evening will be devoted to addresses and questions upon the same and related problems by recognized authorities among manufacturers who are experienced in foreign trade, and who will have a wealth of knowledge to place at the disposal of the delegates.

An entire session of the convention will be devoted to the necessity of legislation, authorizing co-operation among American exporters, who are now individually obliged, through the doubt surrounding the application of the anti-trust laws to foreign trade, to cope with Government-encouraged combinations of foreign rivals and often to sell to combinations of foreign buyers

equipped to depress the prices of American products. The necessity for enactment of the Webb bill, now before the Senate, will be the subject of an address by Robert H. Patchin, secretary of the National Foreign Trade Council, and the necessity for co-operation in the export of natural commodities, such as lumber, copper, farm products, as well as manufactures, will be emphasized in each of these lines.

Because of the attention to be given at this convention to the subject of co-operation, the National Lumber Exporters' Association has decided to hold its annual convention in Pittsburgh beginning on the 24th. Foreign buyers of American lumber have so effectively played one set of producers against another that the industry is in dire need of the relief promised by the Webb bill. John D. Ryan, president of the Anaconda Copper Mining Co., probably the most diligent business advocate of export co-operation, will speak on this and related subjects at the banquet. Chairman Edward N. Hurley of the Federal Trade Commission will also speak at the banquet on the "Government and Foreign Trade."

Much attention will be paid to the foreign investment of American capital. The broad question of America's position in the world of finance to be handled by an eminent financial authority, whose name is not yet announced, while the value of investment in overseas development enterprises in order to create a demand for American manufactures will be discussed by C. K. McIntosh, the vice-president of the California Bank, San Francisco, and a number of other prominent bankers from different sections of the country.

At the last foreign trade convention, in New Orleans, the speech of Frank A. Vanderlip, president of the National City Bank, and a member of the Council, accurately foretold the serious situation which has now arisen, owing to the accumulation of one-third of the world's gold of the United States as a result of abnormal war trade. Since the problem of giving foreign purchasers the credits they are accustomed to receive from European exporters a "group session" has been arranged in co-operation with the National Association of Credit Men, in the hope of paving the way for development of an American system of foreign credits and credit information. The American Exporters and Importers' Association has been invited to join the Council in the conduct of a "group session" on "The Function of the Export Merchant and Commission House."

The need of trained men in foreign trade and the methods of their training will be considered at an educational session under the chairmanship of Chancellor S. B. McCormick of the University of Pittsburgh. The Council's educational committee has already conducted considerable research in this direction. Dr. E. E. Pratt, Chief of the Bureau of Foreign and Domestic Commerce, United States Department of Commerce, will outline a Government plan whereby trained men may advertise their qualifications through the daily commerce reports issued by the Government, and firms may advertise their needs of such men. This is expected to solve a serious difficulty in the extension of American foreign trade.

The interest of the farmers in foreign trade will be given particular consideration in this convention. B. F. Harris of Champaign, Ill., a large farmer and close student of agricultural economics, will speak on "The World Market for Agricultural Products," and Prof. T. N. Carver of Harvard University, new Chief of the Division of Rural Organization, United States Department of Agriculture, on "Foreign Trade Policy from the Farmers' Standpoint." Melville E. Stone, general manager of the Associated Press, will address the convention on "World News and World Trade—the Effect of News Upon the Prestige of the United States Abroad," and F. J. Koster, president of the San Francisco Chamber of Commerce, will tell "How Commercial Organizations Can Aid Foreign Trade Development."

The United States Department of State and Commerce are cordially co-operating with the Council to make available to the delegates Government Trade information and advice regarding foreign markets. An effective method of bringing delegates into contact with the Government Trade experts has been devised. Moreover, to enhance the benefits to the delegates from conferences with the officials, delegates are requested to write the secretary of the National Trade Council, 1 Hanover Square, New York city, submitting specific questions upon the markets they are inter-

ested in and similar questions, so that the proper official may come to the convention prepared to give the required information.

Any business man interested in foreign trade who desires to attend the convention is requested to make application to the secretary as above.

The Secretary of State will assign to the convention several consuls-general and consuls from Europe, Latin America and the Far East who are expected in the United States at the time of the convention. Among those will be A. L. M. Gottschalk, consul-general at Rio de Janeiro. This official and several others who have been in the consular service for many years will be accessible to delegates for the purpose of personal consultation and informal conference. The Secretary of Commerce has already assigned to Pittsburgh officials and experts of the Bureau of Foreign and Domestic Commerce, who will be available for individual consultation. Dr. E. E. Pratt, Chief Division of Domestic and Foreign Commerce, Department of Commerce, Washington, D. C.; D. E. Casey, manager Division of District Offices, Washington; J. E. Fitzgerald, Chief of Consular Division, Washington; Edgar M. Dillon, district office manager, New York; Eliot G. Mears, Chief Division of Commercial Agents, in charge of directing agents, making investigations in the field, New York; C. P. Carter, in charge of sample exhibit at New York, who will be in charge of exhibit at convention; Otto Wilson, Latin-American expert; L. Domeratzky, foreign tariff expert.

The Pan-American Union will have a representative present who will be glad to supply information and advice derived from that organization's work of promoting Pan-American friendship in commerce.

A number of gentlemen long experienced and successful in foreign trade at the heads of large selling foreign organizations, or as export and import merchants, will be present to give particular advice to the delegates on the details of foreign trade. An effort has been made to provide opportunity to facilitate the interchange of personal views and experiences from delegates, and it is felt that through the Government officials, the representatives of the Pan-American Union and the corps of volunteer trade advisers, whose experiences touch all classes of activity in every corner of the globe, an adequate opportunity is provided for delegates to obtain desired information.

To permit delegates to observe the great industries located at Pittsburgh, inasmuch as Pittsburgh is the source of the basic material of much of our export trade as well as of many highly finished products sold abroad, one afternoon has been reserved for separate inspections of the plants of the Westinghouse Electric & Manufacturing Co., the American Window Glass Co. and the Edgar Thompson works of the Carnegie Steel Co. and a modern mine of the Pittsburgh Coal Co. The managements of these plants have courteously made special arrangements for the reception of the delegates and the explanation to them by experts of the processes.

The "Foreign Trade Special," which now rivals the "Bankers' Special," running to the annual convention of the American Bankers' Association, in the number of important men it carries, will run from New York as usual. The Pacific Coast, keenly alive to the foreign trade possibilities in the Orient, is planning to send 150 delegates, most of whom will travel on a "Pacific Coast Foreign Trade Special" now being organized by the Chamber of Commerce, the delegation to be headed by Capt. Robert Dollar the famous shipowner and Oriental trader of San Francisco. All the West Coast seaports from Bellingham, Wash., to San Diego will be strongly represented, for the Pacific Coast commercial organizations hold that their interest in foreign trade is second to none, and that if a national foreign trade policy is to be developed a little thing like a four-day journey to Pittsburgh and four days back must not stand in the way.

The enthusiasm of the Pacific Coast vividly symbolizes the nation-wide interest in foreign trade. Whereas in 1914 a foreign trade convention dealing with the broad general principles of international commerce was something of a novelty, during the last two years few subjects have been so extensively discussed; but the National Foreign Trade Convention remains the one regular assemblage exclusively devoted to foreign trade, which represents the mutual interests of manufactured and natural products, industry, merchandising, transportation and finance.

The country has awakened to the need of "commercial preparedness."

Community Interest in Industry Fostered by Spirit of Co-operation

INTERESTING EXPERIMENT IN DEVELOPMENT WORK IN BEHALF OF
COUNTRY NEIGHBORHOODS—AN EXAMPLE THE SOUTH GENERALLY
MIGHT FOLLOW TO GREAT ADVANTAGE

By JAMES D. BURTON, Oakdale, Tenn.

Industrial development in the South places many men of leadership in country neighborhoods as superintendents and general managers of large financial interests. In many of these places the local inhabitants have not had an opportunity to get a nation-wide view of progress, and their means of earning a livelihood and making money are very limited. The writer takes the position that every leader in a community owes something to the neighborhood in which he finds himself, whether his support comes directly from the people or not. To this end there ought to be attention paid to ways in which we may help the neighborhoods when it is within our power to render a service. Herewith the writer gives a bit of experience in dealing with a country neighborhood in the Tennessee Mountains which proved helpful to the local citizens.

I was appointed general secretary of the Cincinnati, New Orleans & Texas Pacific Railway Young Men's Christian Association at Oakdale, Tenn., where the association has a large restaurant department in connection with its work. Over 500 meals and lunches were served every 24 hours, and the annual expenditures amounted to over \$60,000. The location of this railroad terminal, where between 600 and 1000 railroad employees must be fed and slept, is in a rural mountain community. The nearest markets are Knoxville, 55 miles away, and Chattanooga, 84 miles to the south. Instead of buying all of my produce from these markets I encouraged the farmers of the neighborhood to grow as much as possible of the things I would need in the restaurant department. A large quantity of potatoes, onions, roasting ears, beans and tomatoes were needed during the year. The response was very gratifying.

I always paid cash to the farmers for what they brought in. I learned that the practice of the neighborhood merchants was to exchange goods from their stores for everything offered to them by the farmers. This worked a hardship on many farmers who needed a little ready cash. I have the satisfaction of knowing that I helped a good many farmers with a little cash in payment for what they brought in from their farms and gardens. It is no wonder that many of them use the mail-order houses in preference to their local merchants. I think it is due to the fact that the local merchants will not spend their money at home, and the farmers decide that they will not trade at home. There ought to be more mutual co-operation between the business interest of the South and the agricultural element. One is dependent upon the other.

When I entered the Oakdale community I found that there was very little in the way of recreation or of social, educational and religious sentiment. To render a service in this direction I do not consider that it is necessary for a man to be a preacher or a political stump speaker dwelling upon the shortcomings of the human race. One can render assistance in a quiet way that will build up, strengthen and maintain a healthy, sober, community spirit. The development and encouragement of the human material we find about us will be the most lasting piece of work that can be fostered by any individual or corporation.

With this in view the writer gave co-operation along the following lines: I ordered at wholesale prices what the little country church needed in holding bazaars, oyster suppers, Christmas treats for the children and in other ways showing a friendly attitude toward their work. This was very much appreciated, and a service was rendered the country church. It has grown considerably during the past 10 years, having built a new house of worship, and a second one is under course of construction. At the start there was only one little frame building in Oakdale for all religious purposes and one little Sunday-school of 40 scholars, and no resident minister. Now there are two church buildings in the village, two flourishing Sunday-schools with an enrollment of between 300 and 400 scholars, and two resi-

dent ministers giving full time to the field. These undertakings have been encouraged, not by way of usurping authority, but with the belief that the religious element in modern business is a community asset.

Some wooded land in a mountain ravine at Oakdale, near a place known as Rhododendron Falls, has been secured for community picnics. The clearing of the land, the trimming up of the trees, the distribution of flowers and plants, the opening of the forest at proper places, have been managed in a most admirable way, and the place has grown from a wilderness into one of loveliness and beauty. A spring of pure water has been opened during the past year on these grounds, and through public contributions it has been concreted and a rustic footbridge built across Happy Hollow Creek.

This spot has been the scene of many community picnics, where basket dinners are spread, a social hour enjoyed and a community spirit aroused. The construction of a new pike road through Morgan county made possible the opening of the picnic grounds described. The cost of putting these grounds in shape is insignificant compared with the benefits derived. It has secured co-operation for work requiring local support. Any business enterprise, whether large or small, is dependent more or less upon a friendly attitude of the people among whom it is located, and it pays to encourage them along lines calculated to mold friendships. Many business enterprises have suffered a loss in dollars and cents by not establishing friendly relations in the neighborhood where located.

As result of the co-operation given to the country neighborhood about Oakdale the writer is now at home in any part of this mountain territory, and the goodwill of the people is highly appreciated. A few weeks ago the locating of a hosiery mill in Oakdale was up for consideration, and the investors wanted a list of 300 women and girls in this neighborhood who would be willing to work in a hosiery mill if one should be located here. A house-to-house canvass in an auto through Morgan county secured about 400 names for this enterprise. It reveals the fact that the people of the county entertained a friendly feeling for the little village of Oakdale because of the accommodations extended to them from time to time, largely through the buying of their produce for cash, and they were ready to come in and work in this industry if the way should open.

The railroads and other large corporations are rendering a fine service to the country through their financial assistance in opening markets for country produce, the bringing of industries to country neighborhoods and making every community as prosperous as possible. The "personality at the front" will determine largely the measure of success attained in each instance.

This article is written as a personal experience letter in the hope that it may prove helpful and suggestive to those who may be interested along the lines indicated. It is not its purpose to advertise any particular neighborhood, company or agency, but is a simple plea for co-operative work in behalf of the country neighborhood.

A Suggestion as to Development of an Alabama Property.

T. L. COOK, Alpine, Ala.

After reading Dr. Grasty's views in your issue of November 30, 1916, page 43, it has occurred to me that the people who own the Birmingham & Atlantic Railway and Talladega furnace property could be interested in an undertaking as outlined by him. They have an old railway grade very near the gray ore property, and as I understand, they are financially able to develop this property.

[The Talladega furnace, which has been idle for many years, is owned by Ladenburg, Thalman & Co., New York bankers.—Editor MANUFACTURERS RECORD.]

Combating the Ignorant Clamor Against Rivers and Harbors Improvement

IN SPEECHES AND RESOLUTIONS, RIVERS AND HARBORS CONGRESS POINTS
OUT NECESSITY FOR CARRYING ON WORK BY APPROPRIATIONS OF
CONGRESS—WORK IN HAND ON RIVERS AND HARBORS BILL.

By ALBERT PHENIS.

Washington, D. C., December 9.

Standing as the one great organized resistance to the popular, ignorant clamor against rivers and harbors improvements, the National Rivers and Harbors Congress, at its thirteenth annual meeting here this week, reaffirmed the traditional policies and purposes of the organization, which commit the congress, national in its scope, as its name denotes, to the development of harbors and interior waterways for the purpose of increasing their navigability and promoting commerce, "predicated upon the favorable recommendation of the Corps of Engineers as the accredited authority in these matters."

After many speeches and papers had been heard, all of them illuminative of the necessity for improving the waterways and harbors of the country, the resolutions that were adopted recommended "that a general plan be devised, applicable to the country as a whole, by which the most important projects from the standpoint of national efficiency, including defense and the needs of commerce, be selected so as to fit into a harmonious and comprehensive system, and that a feature of such system shall be standardization, including depths and widths; that such projects be considered and adopted as a whole and completed at the earliest practical date, and that continuing contracts be authorized wherever economy and expedition will be promoted."

The enactment by Congress of annual river and harbor appropriation bills was commended as the only method by which the work of improvement can be carried out. In one of the most comprehensive and able addresses of the meeting, General Wm. M. Black, Chief of Engineers, U. S. A., declared that no bill passed by Congress has half the scrutiny and care that are given to the rivers and harbors bill, and he denounced criticism of the measure as wholly unwarranted.

As a business proposition, he agreed that the far-sighted course would be to borrow at a low rate of interest the money necessary to construct needed enterprises and complete them promptly. But failing in this course, the only alternative is to distribute the relatively small appropriations for harbors and rivers over the widest locality. It cannot be expected that the people of one section will stand aside while an important project elsewhere is receiving sole consideration. No bill can be passed that has in it only the projects that will pay the greatest returns; but it is only in those localities where a waterway is economic that the engineers will recommend its construction. If an improvement pays interest on the investment, plus the cost of maintenance, it is a worthy project, and should be recognized as such by everybody.

Illustrations were given of numerous cases in which the increased traffic, at lower rates than by rail, amply rewarded the expenditure. The improvement of a waterway simply to force railroads to meet water rates was discouraged, and communities were urged not to ask an improvement where operation of the waterway is not intended. In educating the public to the value of waterway improvements, communities should at the same time be educated as to the legitimate purposes of the work.

The relations between the railroads and the waterways was touched on by several speakers, and in the resolutions of the meeting it was declared that there should be a complete co-ordination of service between railroads and waterways. Neither should be used in a manner inimical to the other, but both should be utilized to the fullest extent for the promotion of commerce and the public welfare.

Water carriers are entitled to such differential in their favor as their intrinsic merit and lower cost of operation may justify, it was declared.

While on the matter of rates, Congress was urged to amend the law as to empower the Interstate Com-

merce Commission to fix minimum as well as maximum rates and charges applying to the transportation of freight by carriers under the jurisdiction of the commission. The importance of water terminals was stressed in several of the speeches, and the resolutions contained a declaration that "water terminals are essential to the healthy development of water-borne traffic, whether such traffic is carried exclusively by water or jointly by rail and water. Such terminals should have an adequate area, together with necessary warehouses and freight-handling facilities. There should be physical connection between such terminals and the railroads. We believe that the time has arrived that appropriations for harbors and interior waterways should be predicated and conditioned upon local co-operation in the construction of adequate terminals upon such plans as may be recommended or approved by the Government engineers."

That the relative importance of harbors and interior waterways and the inter-relation with the railway systems of the United States may be readily understood and appreciated, it was declared to be necessary that data be officially collected and published regarding water-borne commerce, both domestic and foreign. "There is at present no satisfactory method for ascertaining this information, and with the exception of a portion of our foreign commerce, all data regarding our water-borne commerce are secured only from voluntary sources, and are incomplete, unreliable and misleading. We earnestly urge upon the Federal Congress the necessity for legislation providing for the official collection and compilation of all facts and statistics relating to our water-borne commerce, properly divided as to classes and as to the harbors, sub-harbors and interior waterways upon which it may be carried, and that such facts and statistics be published annually by ports, sub-ports and interior waterways, rather than by collection or customs districts."

The importance of improving rivers and harbors for commercial and defensive purposes was covered in the resolutions, and it was declared that the frequently recurring congestion in rail traffic and the periodical shortage of cars, "which paralyzes commerce, emphasizes the inadequacy of rail facilities and makes it obvious that the rational route to relief is through the wise development of the waterways of the country."

The value of inland waterways in time of peace and their necessity in time of war was emphasized in a number of the addresses, particular attention being called to the importance of the intercoastal canals and the Chesapeake and Delaware Canal, on which much-needed improvements should be made without delay, it was declared.

The sessions of the meeting were characterized by a conspicuously deep interest in the matters presented and discussed. Delegations were present from all over the country. Some of the delegations were afforded an opportunity while in Washington of attending hearings of the Rivers and Harbors Committee of Congress. After adjournment I asked Chairman Stephen M. Sparkman of Florida what kind of a Rivers and Harbors bill his committee would probably report.

"Our estimates call for an appropriation of about \$31,000,000," he replied. "Of this, in round numbers, \$5,500,000 is for maintenance, \$25,000,000 for works of improvement and \$350,000 for contingencies. We will have to have this to take care of improvements in hand, otherwise the work will stop. This would mean a serious loss, not only to the projects in hand, but in the way of deterioration to machinery, disintegration of organizations, etc."

"We may shade the amount to \$30,000,000, as we haven't finally passed on all the items. We have been going over the items for the past week, and will finish the consideration of these items some time next week."

"Then there is the question of new projects, which

haven't been considered and which will not be taken up till we have finished the consideration of the old. Personally, I am very much in favor of including new projects, but it will depend on the condition of the treasury as to whether we have any new projects. There are many very worthy projects that ought to receive attention in this bill, for there have been no new projects included in the past four years. I can say that a majority of the committee is very much in earnest in favor of taking on new projects—if the condition of the treasury makes it feasible."

WILD TIMES IN COAL AND COKE.

Enormous Advance in Prices Everywhere,
With Greatest Prosperity Producers Have
Ever Known.

Birmingham, Ala., December 9.—[Special.]—If there was ever a time when the term "drunk with prosperity" was applicable to the producers of coal and coke, it is the present. This condition is not local, but nation-wide. In every section of the country where coal of any description is mined the spirit of high prices has permeated the atmosphere, and the phrase "coal is coal" is heard on every hand. During the past week one large Virginia producer told the writer that during this time last year they were selling their coal for steam purposes between 75 cents and 80 cents per ton f. o. b. cars at the mines, and that at the present time they were asking and getting for this same grade of coal \$6 and \$7 per ton for prompt shipment. He also stated that he was figuring now with a very large user of coal in North Carolina at \$2 per ton at the mines for their entire 1917 requirements. I was also talking to a large producer of Tennessee coal, and his opinion was that during 1917 he expected his steam coal contracts to average between \$2 and \$2.25 per ton at the mines for ordinary use, and between \$1.50 and \$1.75 for railroad fuel. The Alabama coal operators have the same trend of opinion.

In the fields above referred to there is another branch of the coal industry that has been completely demoralized by reason of the high prices of coal, namely, furnace and foundry coke. So eager have been the operators to get every ounce of prosperity from present conditions that they have put out of commission hundreds of coke ovens, with the consequence that they are today swinging between two nerve-wrecking alternatives, that of contracting their coal at a most attractive figure or taking their chances on a continued high coke market, and in the meantime reaping a harvest for spot coal.

I know of an offer made one coal company in Virginia to pay it \$2 per ton for its coal in the coke, plus a premium of 50 cents per ton for coking the coal, which was equivalent to \$4.50 per ton at the ovens for the coke for shipment through the entire year of 1917. The proposition was taken under advisement for a day, then declined, with the suggestion that they believed the steam coal market would go even higher than \$2 per ton at the mines.

The Virginia coke operators are today getting \$10 to \$12 per ton for whatever spot coke they may have to offer, and are declining to make any further quotations before the first of the year for contract coke. The several coal and coke operators in the Virginia field volunteered the advice that the present year is the first in the past nine years that the coal operator has had a chance to break much above expenses, and that as a consequence they were entitled to anything that they might be able to get.

This wild chase for enormous profits has not been confined to the spasmodic buyer, but has applied to old customers whose contracts have expired during these times, and who have been forced to either renew at high figures or else buy elsewhere, or possibly do without. There seems to be no regard for the bounds of reason in the matter of coal and coke sales, and both buyers and sellers seem to pursue their course without a single thought of what the morrow may bring forth. The buyer seems to figure that he must cover his requirements now or perish, and the seller seems to think that there is no salvation for present conditions in the matter of reaction when there shall be a sufficient car supply to care for the wants of customers.

Significance of the Iron Cap or Gossan Outcrop of Sulphides

WITH SPECIAL REFERENCE TO THE CALCULATION OF TONNAGE.

By F. B. SPEED, JR., Mining Engineer and Geologist, Charlottesville, Va.

The sulphides of copper, lead, zinc and iron, and the other ores of these metals, have been more sought after in the Southern States and have experienced a more widespread and systematic development in this region since the beginning of the European war than for several decades prior thereto. In prospecting for the ore minerals of these metals, however, much energy has been wasted by persons whose training and experience, unfortunately, has happened not to fit them for attaining successful results. Among these inexperienced prospectors have been many also who have expected to find the sulphides outcropping as such, whereas, as a matter of fact, it is very rare indeed that they are evidenced other than by gossans or iron caps.

The various minerals of the metals above mentioned are frequently found in association with one another, and if pyrites be present it results in their outcrops existing as iron caps or gossans. The same result is found when there is present, for instance, the copper ore mineral chalcocite, which contains iron as an essential constituent. Persons familiar with these sulphides in their unweathered condition, and not aware of the kind of outcrops they yield, would readily pass over valuable deposits without recognizing them as such. In this connection, however, it should be stated that the iron caps of such sulphides are all limonites or brown iron ores, yet obviously all brown iron ores do not indicate that sulphides will be encountered below them. Furthermore, the limonite ore known as gossan is definitely characterized by a cellularity and porosity and certain minute physical details, so that those who have not had sufficient experience with them may not readily distinguish the gossan limonite from the other types of limonites.

While the recognition of these gossans may appear a very simple matter, indeed, yet it really requires considerable skill to identify them as absolutely representing the outcrops of sulphide deposits. It not infrequently happens in regions where gossans occur that other limonites are often found which look very much like them, but instead of being iron caps of sulphides are limonites of the bog iron ore type. Among the experts along this line in the Southern States, Dr. J. S. Grasty of Charlottesville, Va., formerly associate professor of economic geology at the University of Virginia and now professor of mining geology at Washington and Lee University, has probably done more work than any other, and the writer is indebted to him for much valuable information.

Another fact with regard to these gossans or iron caps of sulphides is their depth and line of contact with the sulphides below. It is this gossan-sulphide relation which it is the purpose of this article particularly to emphasize.

Many important deposits of sulphide ores have been discovered by the prospecting of their gossan outcrops, but in the later development of the ore bodies the relationship which the gossan bears to the sulphides is sometimes lost sight of or is given but little consideration. When one stops to consider just what the gossan is it becomes readily evident that the recognition of this relationship is of considerable importance in directing development work, and more particularly in making estimates of tonnages of ore blocked out in the mine.

Since the gossan is formed by the oxidizing action of meteoric waters upon the sulphides, the depth to which it extends depends upon the level of the ground water table, below which the sulphides are protected from the oxidizing effect of the meteoric waters in much the same way that a log immersed in water is protected to a large extent from decay by direct oxidation. In other words, the gossan is the extension of the sulphide body above the level of the ground water table, which by its exposure to atmospheric agencies has become more or less completely oxidized. Therefore the line of contact between the gossan and the sulphides must be known before the "blocked-out tonnage" of ore in the mine can

be correctly estimated. Since this line of contact will naturally follow closely the level of the ground water table, the problem appears quite simple, but incomplete evidence on this point may easily be misleading.

Engineers, in referring to the "blocked-out tonnage," mean that portion of the ore body which has been cut on three sides. In cases where there are gossan outcrops it is obviously necessary to cut the ore body on only two sides, the gossan itself representing the third side. Those engineers whose experience and geological training has not been such as to cause them to recognize this fact and the importance of determining the line of contact between the gossan and the sulphides frequently assign to an ore body cut on two sides queer and fanciful outlines which can be readily ridiculed and proven to be incorrect by those familiar with their genesis and habits, and their anatomy, so to speak.

An excellent example of how the disregarding of this relationship may lead to considerable error in tonnage estimates is found at the Valzanco mines in Spotsylvania county, Virginia. The ore deposits here consist of closely intermingled sulphides of lead, zinc and iron, filling fissure veins which evidence themselves at the surface by gossan outcrops, which can be traced for more than 1000 feet. In the No. 1 shaft, which has been sunk on what is known as the Holladay vein, the gossan is found to extend to a depth of approximately 100 feet, and the contact between the gossan and the sulphides can be clearly seen on the 100-foot level. During the early stages of development work it was assumed, for lack of further evidence, that the gossan everywhere extended to this depth, and tonnages were estimated accordingly. As the development of the mine proceeded raises were made in the vein from the 150-foot level, and in the raises at some distance northeast of the shaft it was found that the sulphides extend to within considerably less than 100 feet of the surface. More recently surface development of the gossan by trenching disclosed the fact that fresh unaltered sulphides exist within six feet of the surface, at a distance of about 700 feet northeast of the shaft.

These facts indicate clearly that the original assumption as to the depth of the gossan was considerably in error when applied to the ore body as a whole, and prompted a study of the available data. The elevation of the contact between the sulphides and the gossan was noted at every point where exposed, as well as the elevation of a spring northeast of the shaft which had been drained by the workings on the 150-foot level. The line of contact is, of course, irregular, but on the basis of these data the average depth at which the sulphides are encountered was placed at 100 feet above the 150-foot level, instead of at 50 feet, as had formerly been assumed. As the continuity and width of the vein had been definitely proven in this direction for about 400 feet, it is evident that the tonnage of ore "blocked out" added by the correct determination of the depth of the sulphides was considerable. For example, assume a length of 400 feet on the vein, and average workable width of 10 feet, and the weight of the ore as 10 cubic feet to the ton. If the sulphides extend only 50 feet above the 150-foot level, the ore above this level would be $(10 \times 400 \times 50)$, divided by 10, equals 20,000 tons, whereas if the sulphides extend upward 100 feet, the amount of ore would be $(10 \times 400 \times 100)$, divided by 10, equals 40,000 tons.

This example does not represent an exceptional case, but one which might be encountered in any ore deposit of this type. The tonnage added in this case, while small as compared to the total ore blocked out, has enough value to make the recognition of the principle involved well worth while, and would in any mine during its early stages have an important bearing on its future. The conclusion to be drawn from these facts is that the recognition of the relationship between the gossan and the sulphides and the determination of the contact between the gossan and the sulphides is an important step in the development of an ore deposit of

the type described. If the line of contact be placed below its actual level, ore which actually exists and which might encourage the owners of the property to do further development work will be omitted from the estimates, while if the line of contact be placed too high, a value which does not exist might be added to the property.

Developments during the past year have certainly indicated that too little attention has been given in the South to the study of the distinguishing characteristics of these iron caps of sulphides. Much money has undoubtedly been expended in prospecting for the ores of copper, lead, zinc, etc., in localities where they do not exist, while on the other hand it is probable that many valuable deposits of sulphides have remained undeveloped because of the failure to recognize what their outcrops actually represent.

TEXAS RICE SHIPPED TO CANADA.

Possibility of Important New Market Being
Opened Up for American Product.

Beaumont, Tex., December 9.—[Special].—Rice growers and others who are interested in that industry attach considerable significance to the shipments of several carloads of Southern rice which were recently made to the Mt. Royal Milling & Manufacturing Co. of Montreal, Canada. While these shipments were in the nature of an experiment, it is believed that they will prove satisfactory in every respect and will lead to the opening of a new market for the grain.

In order to thoroughly acquaint himself with the quality and other details of the rice production of Texas and Louisiana, Robert B. Ross, Jr., managing director of the Mt. Royal Milling & Manufacturing Co., recently made a tour of the Gulf coast rice belt. Heretofore this plant has handled nothing but Asiatic rice. This supply came chiefly from Calcutta and Rangoon, in India. The war and the danger of submarine attacks upon cargo-carrying steamships put up the ocean freight rates so high that the importation of rice to Canada from India is now practically prohibited. For this reason the Mt. Royal Milling & Manufacturing Co. has been compelled to turn its attention to the American source of supply. Before doing so, however, this company and other Canadian mills made the experiment of importing rough rice from Japan and China. The grains from those countries proved to be of such an inferior quality, it is claimed, that efforts to obtain the supply from those sources were abandoned.

It was pointed out by Mr. Ross, on the occasion of his recent visit here, that the Canadian rice mills are not equipped with hulling machinery, for the reason that all rice imported from India is hulled where it is grown. It is the practice with American rice not to hull it until it reaches the mill. In order that the Southern rice may be handled, the plant of the Mt. Royal Milling & Manufacturing Co. at Montreal will be immediately equipped with hulling machinery.

It is believed by rice men that if the Canadian market is once opened to this product it will expand rapidly and prove of much benefit to the American rice industry.

Progress of Soy Bean Industry.

Commenting on the raising of soy beans and their uses, the chief of Bureau of Plant Industry, United States Department of Agriculture, has this to say:

"Notable progress has been made in bringing about the commercial utilization of soy bean seed for the manufacture of oil, meal and various more or less complex products. The soy bean is well adapted to the whole cotton belt, and indeed to the whole corn region. In the cotton belt it promises to be an important element wherever the acreage of cotton has been reduced. The immature bean seeds make a very delicious vegetable and are canned with ease. Inasmuch as soy beans can be more cheaply produced than any other bean seed, it is believed that there is a large field for the canning of green soy beans. Efforts are now being made to induce canning factories to put the product on the market. In the growing of the soy bean and in manufacturing products therefrom the United States can successfully compete with the Orient."

Telephone in Every Mill-Operative Home—Typical of Welfare Work by Group of Georgia Mills.

MODEL VILLAGES OF WEST POINT MANUFACTURING COMPANY NOT EQUALLED BY BEST EXAMPLES IN NEW ENGLAND—\$10,000,000 INVESTMENT IN MILLS AND ALLIED INTERESTS.

[Special Correspondence Manufacturers Record.]

West Point, Ga., December 9.

Several weeks ago the West Point Manufacturing Co., its subsidiaries and associated mills and companies, including the Lanett, Shawmut, Langdale, Fairfax and Riverdale cotton mills, the Lanett Bleach and Dye Works, the West Point Utilization Co. and the Chattahoochee Valley Railroad, through George H. Lanier, vice-president and general manager, without previous intimations, enclosed an additional week's pay in every one of the envelopes of their 4000 employees. There was great rejoicing around West Point. But when last Saturday it was announced, in the shape of another surprise, that until further notice the wages of every employee would be raised 10 per cent., the joy of three-fourths of the population of the community of West Point was too great to be estimated. These increased payments were not in the form of charity, according to Mr. Lanier, but were made to help meet the high cost of living.

In this connection it is interesting to note that \$30,000 is now being spent at the Lanett mills in tearing down, rebuilding and remodeling all the cottages in the village. A part of this work includes the construction of a \$30,000 sewerage system for the exclusive use of the villagers. Water and electric lights in each house are also a part of the program.

This is merely one of the indications of the constructive and decidedly practical welfare work which the mills and allied companies, of which Mr. Lanier is the local executive officer, are doing for their employees in the different mill villages around West Point.

The new Fairfax mill, one of the handsomest in the South, was recently completed at a cost approximating \$1,000,000. The mill village is thoroughly modern, and no expense has been spared to make it complete in every detail. The village was designed by the P. J. Berckmans Company of Augusta, Ga., landscape architects, and when the planting scheme is completed Fairfax will indeed present a pleasing appearance. Among the many particularly attractive features of the village is the boulevard which encircles the mill. The village streets, running at right angles from the boulevard, are broad, and are now being graded and marked on each side by concrete curbs. In this village the owners have perhaps gone a step farther than any other mill in the South. A telephone system, with a station in every cottage in the village, connecting not only with all their neighbors, but with the exchange and all the subscribers here in West Point as well, is now being installed, with a central switchboard located in the village theater building at a merely nominal price.

The Shawmut mill village, which was also laid out by the same landscape architect, shows in the matured plans of its designers a touch of art that is exceptionally attractive. The grass and shrubbery in the plaza effect in front of the mill, and the kindergarten, swimming pool, school, store and fraternal buildings all contribute to the making of a charming scene.

"Our idea is to encourage our employees to educate their children," said Mr. Lanier, "and to that end we have invested for the different mills around West Point approximately \$200,000 in schools, playgrounds, kindergartens, auditoriums, day nurseries and the like. Some idea of the success we are having is indicated in the fact that with 4000 employees there are 1500 of their children in the different village mill schools. This is very encouraging, for we believe that the happy and contented employee is our greatest asset and that without him our organization would be a failure and our present business impossible to handle.

"The people working in our mills are of the very purest Anglo-Saxon, and while they ask for nothing more than they earn, we are glad to see them take advantage of the educational and recreational facilities that both we and the county are in position to offer. Some great men have come from the mill villages of

the South, and in pursuing our present policy we trust that we are doing our share toward bringing out the inherent strength of character in these people, and at the same time making, as best we can, their living conditions more pleasant and profitable."

If any cotton-mill company in New England can show as broad a plan worked out as fully for the benefit and development of its employees as is to be found in this thriving community, it has been careful never to let anyone hear about it. In this connection I am reminded of a remark of the late Hon. Wm. C. Lovering made some years ago to the editor of the MANUFACTURERS RECORD. Mr. Lovering was making a tour of Southern cotton-mill villages with a view to building a mill in the South which he and his associates afterwards established at Lindale, Ga. Mr. Lovering was one of the leading cotton-mill men of New England. After he had examined a number of mills in the South he turned to the editor of the MANUFACTURERS RECORD and said:

"If anyone should suggest that your cotton-mill operatives of the South are not superior to those of New England he would simply be saying that native Americans, pure Anglo-Saxons, are inferior to the lower classes of foreigners who now fill our New England mills."

Approximately \$10,000,000 is invested in the combined mills and allied interests of the West Point Manufacturing Co., including its own hydro-electric power development, electric lines and railroads.

ROY G. BOOKER.

ORGANIZING AGAINST PINK BOLL-WORM.

United States Government Co-operating With Texas Authorities in Preparations to Meet Possible Invasion Next Spring.

Austin, Tex., December 9.—[Special.]—Ed. L. Ayres, chief inspector of nurseries for the State agricultural department of Texas, and O. J. James, deputy in the same division, have gone to the Laguna district in Mexico to make a study of the pink boll-worm, in anticipation of its possible invasion of Texas next year. It is proposed by the State department of agriculture, according to Ernest E. Scholl, entomologist, to adopt a policy of thorough preparedness in the matter of fighting the worm. As part of that policy, Messrs. Ayres and James will make a thorough study on the ground of the habits of the insect, parasites which destroy it and other methods of effectively fighting it. In this work the State department is acting to complete co-operation with the United States Department of Agriculture, through W. D. Hunter, who is in charge of the Southern field crop inspection investigation of the department's bureau of entomology. Mr. Hunter is expected here shortly for conference with authorities of the department.

The pink boll-worm, it is believed, has had an excellent chance of getting a foothold in numerous cotton-growing sections in Texas. The United States Department was the first to receive intimation that infected seed had crossed the border. Shipments of this seed were traced by the United States Department to Alice, San Antonio, Brownsville, Beaumont, Kaufman, Kerens, Dallas and Wolf City. An inspection of the way-bill impression books of railroads handling seed from Mexico was made by the State department of agriculture, and revealed these additional points to which shipments of Mexican seed had been made not mentioned in the report of the investigations of the United States Department—Fort Worth, New Braunfels, Hearne and Houston. Representatives of the State department immediately began the work of inspecting

seed at the oil mills of all of these places, with a view to destroying infected seed if it was found. So far they have discovered no seed that is infected. However, the infection of seed by the pink boll-worm is very difficult to detect. A very minute hole in the seed is all that is observable from the outside, and this is frequently concealed under the lint which adheres to the seed. It will be readily seen how difficult the inspection of a carload of seed for this pest is. Again, the larvae may live in cottonseed for as long as seven months, thus making possible the transportation of infected seed for long distances. It is quite possible that the insect may come to the moth stage while the seed is en route and escape from the car when it is opened. Thus even the destruction of infected seed may fail to accomplish this purpose.

A large shipment of Mexican seed is now held up across the border from Laredo, pending further investigation, although 494 cars from the Laguna district had already entered Texas before the investigation was started.

It has been regarded heretofore that the most dangerous source from which the pink boll-worm might be brought to the United States is in shipments of Egyptian cotton, the pest having been thoroughly established in Egypt. However, these shipments for the most part go to sections where no cotton is grown, consequently the danger of the insect spreading to the cotton fields is minimized. On the other hand, the Laguna seed has this year been shipped right into the heart of the cotton-growing section of Texas, and if the seed is infected there is great danger of the pest being started in Texas. Among other means of preparedness to fight the worm, the State department has decided to call a meeting of the field men and give them thorough instruction in the life history, appearance, etc., of the pink boll-worm in all of its stages, so that it will be readily recognized by the field men of the department if it develops next spring. The State department of agriculture will turn its entire field force next spring to thoroughly examining the cotton fields in the vicinity of mills to which the Laguna seed has been shipped, as it is believed that the worm, if it shows up at all, will appear in the vicinity of these mills, although it is possible that infected seed may have been spilled along the right of ways traveled by the cars containing them.

Mr. Hunter is requesting a special appropriation to aid in the work of inspecting the fields of cotton in the vicinity of mills which have received the questionable seed.

Further precautions that are being taken by the State department include the study of parasites which prey upon the pink boll-worm in its various stages. The chief parasite which has been found most effective in fighting the pink boll-worm is known as the chelonus blackburni, a wasp-like fly which is found in India and Hawaii. Arrangements have been made for the importation of this parasite in case it is found necessary. Mr. Scholl states that the greatest danger from foreign pests, as a general rule, comes from the fact that the parasites which prey upon them are not introduced promptly. It will be remembered that this was the case with the boll-weevil. The pests, according to Mr. Scholl, do their greatest damage in the two or three years immediately following their introduction and before parasites are thoroughly established. Other methods of fighting the pink boll-worm which have been found effective include clean culture, such as grazing the fields after the cotton has been removed, burning over fence corners and all the waste on the land; fumigating the seed with some strong gas; spraying the young cotton, since the larvae feed upon the tender foliage before going into the boll, and the setting of trap-lamps for catching the moth.

Increasing Demand for Feed Grinding and Mixing Machines South.

H. C. MIDDLETON, President Augusta Real Estate Co., Augusta, Ga.

Please send me list of a few manufacturers of machinery for grinding and mixing stock feeds—corn, oats, hay, beans, etc. These mills are springing up over the South to utilize the home products. Formerly immense quantities of these mixed feeds have been coming from the West. As the cotton boll-weevil advances the Southern farmers will have to raise more of the food-stuffs, and these mills will follow. We need one here.

Unique Construction Features of Dixie Highway Through Mountains and Across Lowlands

[Special Correspondence Manufacturers Record.]

Chattanooga, Tenn., December 4.

As the Dixie Highway stretches from the shores of the Great Lakes to the lower end of Florida, there is naturally presented by the various sections of road in the counties and States through which it passes many interesting examples of different types of construction. Passing through communities having different climates and different haulage problems with which to contend, types of roadway have been selected which best fit conditions as they exist. This has resulted in the Dixie Highway representing in its final construction practically every type of modern highway work.

Demonstrating this fact are the illustrations shown herewith of types of construction through a rugged mountain section in Eastern Tennessee, between Nashville and Chattanooga, and a portion of the Tamiami Trail over which the Dixie Highway runs through the Everglades of Florida. One type of construction is in direct contrast with the other, and emphasizes how engineering skill is brought into play to utilize conditions as they exist in the creation, in spite of apparently insurmountable obstacles, of a roadway that will be of permanent construction and of a character that will be in keeping with the standard type of roadway for which the Dixie Highway is famous.

In Tennessee work, State convicts direct from the mines of Brushy Mountain have demonstrated their economy to county and State by the construction of



DIXIE HIGHWAY IN TENNESSEE.
Interesting view of construction work on Suck Creek Gorge road section of Dixie Highway.

four miles of road through the Suck Creek Gorge, between Chattanooga and Whitwell, which is a part of the Nashville-to-Chattanooga link of the Dixie Highway, now in course of construction in every county between these two Tennessee cities. The citizens of Marion county recently celebrated the completion of the grading of their part of this road. The Hamilton county authorities expect to have their part of the Suck Creek road fit for travel, although not completed, early in December, shortening the distance to Whitwell, in the center of the fertile Sequatchie Valley, by 20 miles, in addition to eliminating a ferry across the Tennessee River.

When Judge M. M. Allison, president of the Dixie Highway Association, advocated the construction of the Dixie Highway leading west from Chattanooga through the Suck Creek Gorge, the majority of the citizens of the two counties declared that it was impractical, as the gorge has only been reached heretofore by means of a boat trip down the Tennessee River. Judge Allison, who has been an ardent advocate of the employment of State convicts on the main highways, persuaded Governor Rye and the newly organized State highway department to make one of their first experiments in working the convicts on roads in the construction of the Dixie Highway through Suck Creek Gorge.

This link of the highway is 21 miles in length. It required the construction of 13 miles on the part of Marion county over Walden's Ridge and down into the gorge to the Hamilton county line. Hamilton county was required to build seven miles, three of which were extremely difficult and four are above the high-water line of the Tennessee River.

The combined cost to the two counties for the grading and surfacing of this road will approximate \$125,000.

The views of construction features of the Tamiami Trail through the Everglades are of more than usual interest because of their uniqueness. One of them shows a large land dredge which is being used by the contractors for excavating a drainage canal to rock bottom, and on this building the foundations for a



THE DIXIE HIGHWAY THROUGH SUCK CREEK GORGE, TENNESSEE.

The construction of this road as a part of the Dixie Highway between Nashville and Chattanooga opens up a new section of rugged mountain country that for scenic effect is hardly equaled east of the Rocky Mountains. One view shows convicts at work on this highway, and the change from working in the mines to the open air has had a wholesome effect upon the health of the men. The other view shows a section of the completed grade.



BUILDING THE TAMIAMI TRAIL OVER WHICH THE DIXIE HIGHWAY WILL PASS IN FLORIDA.

These views show sections of the Tamiami Trail being constructed through the famous Everglades. In the picture on the left the contractors were considerably hampered by washouts, but by persistency completed the grade. The illustration on the right shows a section of the completed grade and gives an idea of the uniqueness of scenery along this road.



STAGES OF CONSTRUCTION OF THE TAMIA MI TRAIL THROUGH THE EVERGLADES OF FLORIDA.

The view on the left shows how the contractors constructed the Tamiami Trail with large land dredges, by first excavating to rock bottom and building the new roadway from this foundation upward. The illustration on the right shows the completed roadway thus constructed.

roadway that will be of a permanent character. This is naturally slow, difficult work, as the contractors have to contend with all kinds of unusual conditions and at many points have been thrown back by washouts.

While this work is being pushed with all the vigor

possible, the road through the Everglades to Miami is not expected to be finished until 1918.

The country opened up by the Tamiami Trail will present to the tourist scenery without parallel in the lower South and add materially to the interest which a

trip along the Dixie Highway will afford the traveler.

The Tamiami Trail will also prove of great economic importance, in that it will open up to development thousands of fertile acres by making them more accessible through a modern built highway.

\$500,000 Arcade Building for Atlanta.

The construction of an arcade building in Atlanta to cost \$500,000 is planned to begin March 1 and to be completed by September 1, 1917. This structure is to be erected by the Flynn Realty Co., of which Mrs. Jas. F. Meegan, Washington, D. C., is president; Miss Annie T. Flynn, New York, vice-president, and Mrs. M. M. O'Brien, Atlanta, secretary and treasurer.

The building will be constructed of reinforced concrete, terra-cotta, tile, marble and plate glass. It will have a frontage of 111 feet on Peachtree street, 316 feet on Wall street and 146 feet on Broad street, the Peachtree frontage to be six stories and the Broad street frontage four stories. The construction will permit additional stories on either end. An important feature will be the large central area from Peachtree to Broad street, having a clear width of about 50 feet, this area to be roofed with a skylight. There are three levels to the arcade, beginning at the ground floor or Wall street level, with wide galleries at Peachtree or street level and second floor, but these being arranged in such a way that by setting one gallery behind the other a view will be afforded to all street fronts. The street fronts will be in the main of plate-glass windows, the structural portion of the store fronts being faced with glazed terra-cotta trim.

The interior will be of tile, marble, plate glass and bronze. On the ground floor there will be stores of different depths and widths, having shops and offices on the balcony which will be reached by elevators and staircases. The upper floors of the buildings are de-

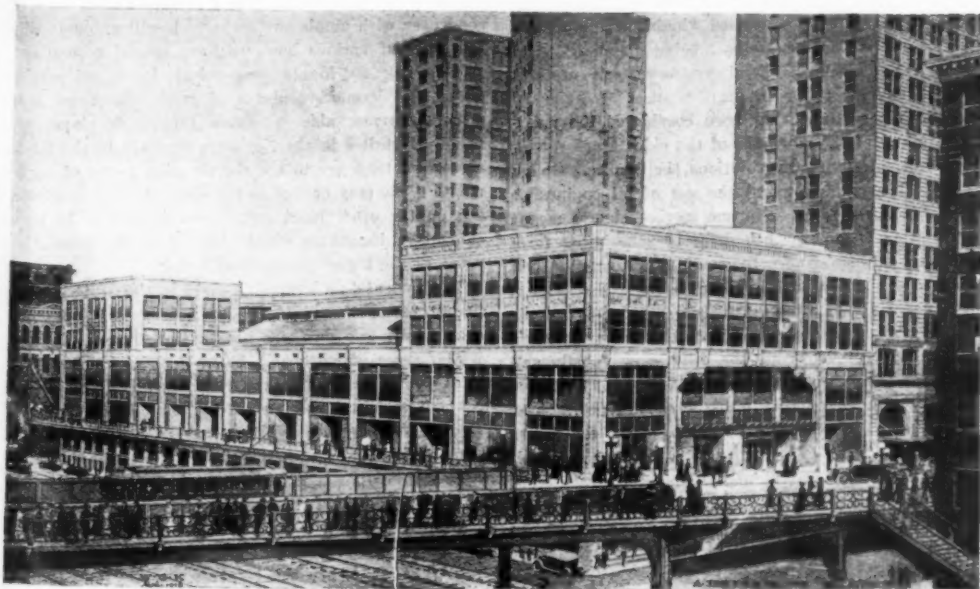
signed for offices, etc. A three-story recessed vestibule on the Peachtree front will form the main entrance to the arcade.

Plans and specifications have been prepared by A. Ten Eyck Brown of Atlanta, and contract awarded to A. V. Gude & Co., also of Atlanta.

Accompanying illustrations present a view of the



INTERIOR OF ARCADE.



ARCADE BUILDING FOR FLYNN REALTY CO., ATLANTA.

building as it will appear when completed and also a view of the interior of the arcade.

Mr. R. R. Otis of Otis & Holliday has closed a loan for the erection of the building with the Northwestern Life Insurance Co. of Milwaukee through the company's local representative, Edward M. Durant. Mr. Otis will have the management of the building.

PETROLEUM REPORTED STRUCK IN FLORIDA.

High-Grade Oil With Paraffine Base Shown by Analysis—Great Interest Aroused.

[Special Dispatch to Manufacturers Record.]

Jacksonville, Fla., December 11.

An analysis of oil specimen from a well which came in Friday at Wakulla county, Florida, shows high-grade petroleum with paraffine base, according to chemical laboratory of Florida State College for Women at Tallahassee, it was learned today.

The geologist of the Standard Oil Co. has recommended that the county buy all land between Wakulla and Suwannee River, so it is reported.

A rush is being made to that section by investors.

Bridge for Bay St. Louis and Pass Christian.

It is planned to build a highway bridge across the Bay of St. Louis, connecting the city of Bay St. Louis with Pass Christian, Miss. The engineer in charge, Howard Eggleston of New Orleans, wires the MANUFACTURERS RECORD that it is hoped to begin construction within 90 days. From \$600,000 to \$800,000 is the estimated cost, and the structure is to be of reinforced concrete and steel, two miles long, with a steel draw having a 100-foot clear space for the accommodation of passing vessels. There will be space for electric cars and for vehicles, the width to be 35 feet and to include a footpath. The Mississippi Bridge & Turnpike Co. will be organized to undertake this work, and it is understood that Weiler, Loeb & Co. of Chicago, associated with New York bankers, will finance the enterprise.

The Cotton Movement.

In his report of December 8 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 130 days of the season was 7,642,786 bales, an increase over the same period last year of 1,459,160 bales. The exports were 2,615,470 bales, an increase of 711,328 bales. The takings were, by Northern spinners, 1,331,950 bales, an increase of 178,334 bales; by Southern spinners, 1,830,187 bales, an increase of 369,701 bales.

Changes and Improvements in the Manufacture of Ice and Artificial Refrigeration

By ROBERT P. KEHOE, New York.

In this particular field very radical changes and improvements have occurred during the past two years. It might be truthfully asserted that the changes in this period have been greater than for the previous 10 years.

To begin with, the principal method of manufacturing ice is now what is known as the "raw-water system." Since the introduction of artificial ice, about 25 years ago, it has always been considered essential to use nothing but carefully distilled water. This was not only with the object of purity, but transparency.

Everyone is familiar with the term "snow ice," which is just the same as any other ice, except that it is full of air bubbles. If ordinary water is frozen in a can or form, without treatment of any kind, it will become "snow ice," because all of the air bubbles are frozen in the product.

By elaborate distillation the greater part of this air may be eliminated. This entails the turning of water into steam and reboiling it. For the purpose of economy it is the custom to operate an ice plant with a steam engine and use the exhaust steam from this engine for producing the distilled water. Such a practice meant that the lubricating oil in the engine cylinder would come in contact with the steam, and one of the first steps in the distillation is grease separation to remove this oil. As a matter of fact, a great deal of difficulty is experienced in the eliminating of all such oil and foreign matter.

The elaborate distillation and filtration of the water to be frozen is responsible for the flat, insipid taste of hygienic ice. The frequent claim that ammonia finds its way into the ice can also be attributed to lubricating oil or other substances, which are often found in the frozen product.

The demand for a product which would be more like natural ice in its taste and odor, and at the same time be free from dirt and impurities, has brought about a radical change. As is generally known, ice is produced in rectangular cans or forms. By suspending a tube or other similar arrangement in these cans, through which air at suitable pressure is discharged, the water in the ice cans is kept in a constant state of agitation, and this causes all of the air bubbles to rise to the top and dissipate themselves in the atmosphere. The result is a clear, transparent block of ice, made from pure natural water, without unusual taste or odor, and on the whole is far more satisfactory than hygienic distilled water ice.

Of course, the water used must be pure, and if it contains any dirt or foreign matter, good filters are necessary. Practically every raw plant is so equipped.

The demand for a better product is one reason for the change. Perhaps a more important reason is the fact that the necessity for a large amount of steam is avoided. This makes it possible to use oil engines, electric motors or highly economical steam engines, which would not have enough exhaust steam for a distilled-water plant. In other words, a raw-water plant may be operated at a much cheaper cost. For example, an old-style icemaking plant, to produce 50 tons of hygienic distilled water ice every day of 24 hours, would use in the neighborhood of 10 tons of coal. Let us suppose that this coal would cost \$4 per ton. This would mean \$40 per day, or 80 cents per ton of ice manufactured.

It is quite possible to operate a raw-water ice plant, driven by a una-flow steam engine, and produce the same amount of ice with about three tons of coal, or a daily fuel cost of \$12, which equals 24 cents per ton.

The una-flow steam engine is another recent introduction which is becoming very popular in its particular application to ice and refrigerating plants. Such engines have been widely used in Germany during recent years; in fact, their greatest development occurred in that country. The term "una-flow" is descriptive of the design, since the steam flows through the engine in one direction only. It enters ordinary valves of the poppet variety at each end of the cylinder, and after expanding and doing its work leaves the cylinder through an exhaust port in the center, which is uncovered by the piston at the end of each stroke. High-pressure superheated steam is used, and the cylinders

are often steam-jacketed. Cylinder condensation is therefore eliminated and economies ranging around 12 pounds of steam per indicated horse-power hour are usually obtainable.

The best feature of all is the single cylinder and the possibility of securing such wonderful economy without the necessity of adopting compound cylinders, which cost money and are more or less complicated in operation. The single cylinder una-flow engine is more simple than an ordinary single cylinder Corliss engine, and bids fair to make tremendous headway in power-plant practice. At least half a dozen large firms are now building this type of engine, including some of the leading steam-engine manufacturers. The most responsible complete the units in the factory and actually operate them before shipment. This special test enables the manufacturer to perfect each engine before it reaches the customer.

The use of oil engines is also becoming very popular in ice and refrigerating plants. In ordinary times, when the cheapest grades of fuel or crude oil cost about 3 cents per gallon, the fuel cost per ton of raw-water ice manufactured is about 15 cents, because the average amount of oil required per ton of ice is about five gallons. For many years this form of power was thought more or less unreliable, but engines of the better class have now been developed to a degree that they may be relied upon to almost the same extent as a good steam engine. In fact, it must be remembered that with the steam engine a boiler plant is required, which adds an element of uncertainty not existing in an oil engine power plant.

While it is true that only one or two large manufacturers built this class and type of engine before 1910, since that date, one by one, other manufacturers have entered the field, until there are now six or eight of our leading builders of prime movers engaged in oil engine manufacture.

Just at present the demand for oil engines of the larger and better class is so great that it is difficult to secure a promise of delivery in less than six or eight months.

All of the larger and more dependable oil engines are designed to use the worst grades of crude or fuel oil. This includes Mexican crude oil, which is very thick and difficult to handle; in fact, in cooler weather it must be heated in order to freely flow through the supply pipe into the engine. Some grades of Mexican oil are so thick that at the temperature of 60 degrees F. they are almost solid. When it is considered that this oil is successfully handled and burned, the development in oil engine design may be appreciated.

Another great stride in advance has been made possible in ice and refrigerating machines by the perfection of what might be termed "high-speed ammonia compressors." The compressor, being the most vital part of an ice machine, has always been very carefully designed, and for 30 or 40 years a speed of 70 or 80 revolutions per minute has been considered the maximum. Many of the machines of the older types ran at not more than 40 or 50 revolutions per minute. Owing to this relatively low speed the use of oil engines or other economical forms of prime movers always meant the adoption of rope or belt drive or some other form of indirect transmission. In small plants rope or belt transmission may be used without any great difficulty, but in large plants, especially where oil engines supply the power, such transmission is a great source of trouble and annoyance. The ropes or belts wear rapidly and sometimes break, causing damage and danger to life and limb. Moreover, they are a source of power loss. This amounts to 10 or 20 per cent. of all the power transmitted.

In a 500-horse-power plant a 15 per cent. loss might easily mean over \$3000 or \$4000 a year. About 18 months ago a horizontal ammonia compressor of the high-speed variety was perfected, and now there are 15 or 20 large units in actual operation. These machines are direct connected to oil engines, electric motors and una-flow steam engines. They operate at from 125 to 250 revolutions per minute. The design is such

that less vibration occurs than in the old types of machines. Thorough and automatic lubrication is insured by special oiling systems, and the new cylinders need very little attention. Of course, the valves are of unusual design, being of the plate variety, which have been used so successfully in air compressor work.

It seems quite safe to say that in a comparatively short time the ice machine which runs at only 50 or 75 revolutions per minute will be out of date, because it will prove higher in first cost, necessitate more foundation and building space and be less economical. A belt-driven slow-speed machine might need a space 60 feet long, whereas a direct-connected high-speed equipment could be placed in a space not more than 20 or 25 feet long. The engine-room equipment of a 100-ton oil-engine-driven icemaking plant using rope or belt drive would occupy a space of about 60 feet long and 50 feet wide. With a direct-connected high-speed compressor arrangement the space would be reduced to 30 feet in width.

A further radical departure may be found in one of the principal parts of every refrigerating or icemaking plant, namely, the ammonia condensers. This is where the ammonia after compression is condensed and liquefied by the influence of cooling water. These condensers usually take the form of vertical stacks of pipes through which the ammonia passes. Over these pipes the cooling water flows and removes the sensible heat from the ammonia.

When ice machines were first introduced, about 1875, the ammonia condensers were made 60 pipes in height. After several years they were reduced to 40 or 50 pipes, then 30, and then to 24 pipes, and finally to 18 pipes. For many years no further reduction in the height of condensers was attempted; in fact, some people still cling to 24-pipe stands. Even today a few engineers will insist upon 24 pipes to each condenser. But the majority use condensers only 12 pipes in height, and these condensers do just as much work as the old-fashioned condensers 18, 24, 30, 36, 44, 52 and 60 pipes in height. In other words, for years and years all of those other pipes have been wasted. Of course, 12-pipe condensers are operated with the greatest possible efficiency. This has been brought about by very exhaustive tests and resulting improvements in design and operation.

All of the various new-style condensers agree in one principle, and that is the "counter-current" design, which provides for leading the ammonia in at the bottom and as it rises through the condensers it comes in contact with colder and colder water.

Some condensers are operated on what is claimed to be a "flooded system." That is, a certain amount of liquid ammonia is retained in the condenser in order that the incoming ammonia gas may pass through this ammonia liquid and be more rapidly cooled. There is considerable doubt, however, as to this phenomena, and some of these flooded contrivances have proved to be somewhat troublesome under regular operating conditions. The difficulty seems to arise from the refrigerating load, which suffers rapid changes. Under average conditions it is better to have a more practical form of condenser with ample surface, which will automatically take care of various loads without special adjustment.

Referring to highly economical forms of motive power and icemaking plants of great refinement, it is a rather remarkable condition that such plants are usually installed in the Northern States. In the South there is a tendency to use the simplest forms of equipment. This may be due to the class of labor available, but on the other hand great economy should be more evident in icemaking plants located in the South, because of the higher yearly load factor.

To illustrate, an icemaking plant in the State of Minnesota will not need to run at full capacity for more than about two or three months in a year. In mid-winter there will probably be no demand for ice. The total yearly production may not exceed 30 or 40 per cent. of the total possible production. In the State of Georgia full capacity will be needed for a much longer period; in fact, the total yearly production should be nearer to 75 per cent. of the total possible production.

A plant to manufacture 50 tons of ice every 24 hours, built in the cheapest possible manner, could be installed for about \$30,000. A plant of the most elaborate type, to secure the greatest economy and to produce the same capacity, might cost as much as \$50,000. This would mean an additional investment of \$20,000 for refinements. The cheap plant would require, say,

10 tons of coal to operate it and two additional men per day. The economical plant could get along with three tons of coal and two less men. Figuring the coal at \$3 a ton, there would be a saving of seven tons, or \$21 per day, and two men at \$2.50 a day, or \$5 additional, making a total saving of \$26 a day.

If a plant produces in a year the equivalent of 100 days full production, this would result in a total saving of \$2600, but an additional \$20,000 has been invested to accomplish this saving. If we figure only 15 per cent. interest charges, repairs, depreciation, etc., there would be capital charges on the \$20,000 of \$3000, which would exceed the amount saved. On the other hand, if the plant produces the equivalent of 240 days' full production in a year, a saving of nearly \$6500 would be made on an additional investment of \$20,000. This would certainly justify the extra expense.

The widespread tendency toward prohibition throughout the United States has naturally reduced the number and capacity of breweries. This has affected the ice machine business, because breweries have always formed a large percentage of the market for refrigerating machinery. In fact, it is to the brewers that credit is due for the introduction of refrigerating machinery and all of its pioneer development.

To compensate for the loss of the brewery trade, however, we have in recent years developed a great demand for refrigerating and ice machines in other industries, such as large ice-cream plants, dairies and chemical factories. Refrigerating machinery is used for a larger variety of purposes than ever before. No ice-cream company may now be considered prominent without a complete refrigerating and ice-making plant. The same is true of the largest dairies and milk depots, and in the chemical industry the application of refrigeration are numberless.

Since the European war has encouraged many new firms to engage in the manufacture of chemicals which have heretofore been furnished us from the continent, the field of refrigeration in the chemical world is now enjoying a much larger scope.

The small ice and refrigerating machine, which may be used by an ordinary butcher, dealer in groceries and other small tradesman, has also been developed to a degree, and the volume of small machines is now probably five or ten times as great as it was five years ago. Small machines are now becoming common among stores of any size, and this branch of the industry has actually made remarkable progress in the last two or three years.

Building Up an Industry in Jack Rabbit Meat.

Austin, Tex., December 8.—[Special.]—The canning of jack rabbit meat and its conversion into sausage seems likely to develop into an industry of some consequence in Texas. One plant of this character is already in operation at Llano, and one of the largest canning establishments in the State is now experimenting with rabbit meat in the manufacture of chile con carne. A firm in Toronto, Canada, which handles shipments of 40,000 rabbits at one time from Australia, is in the market for Texas rabbits when they can be shipped in quantity, and a firm in Memphis, Tenn., has made announcement to the same effect.

Interest in the matter has been taken by Agricultural Commissioner Fred W. Davis, who sees in the new industry a practical means for attacking a menace to farmers of West and Southwest Texas. Jack rabbits are particularly plentiful in the plains country, where they attack corn, milo-maize, alfalfa, and, in fact, almost anything that is green. It is not unusual, it is said, for jack rabbits to destroy in two weeks' time the entire crop of a settler.

The meat of a jack rabbit is very palatable, tasting somewhat like venison. In preparing the meat for the market it is believed by Commissioner Davis that turkey-packing plants located in rabbit-infested sections can be utilized to good purpose in handling and shipping rabbits. These plants are employed only a short season of the year with the turkey crop, and during the rest of the year they are generally idle.

The fur of the Jack rabbit is in demand also as cheap trimming for caps, hats and coats, so that in some places the hides bring as high a price as the meat.

STEEL STEAMSHIPS TO BE BUILT NEAR NEW ORLEANS.

Four Tank Steamers to Cost \$1,200,000—First of Their Kind to Be Built South of Newport News.

As indicating the possible permanent establishment of an extensive new shipbuilding industry in the lower South, reports of contracts let recently by the Mexican Petroleum Co. of New York to the Alabama & New Orleans Transportation Co. are of more than passing interest and significance.

The contract calls for four steel steamships, each to cost \$300,000, or \$1,200,000 in all. The ships will be 261 feet long, 37-foot beam and 20 feet deep, each with 3000 tons capacity. They will be modern in every respect, equipped for steam boilers and turbo generators, and electric motor driven twin screws. The vessels will be built on the Isherwood system, and will have a speed of approximately 8½ miles per hour. They will be tank steamers for service between the oil fields of Mexico and coastwise points of the United States, and will carry not less than 16,000 barrels of crude oil per trip. The boats are to be delivered June 1, August 1 and November 1, 1917, and February 1, 1918. They will be constructed at the shipyards of the Alabama & New Orleans Transportation Co. at Violet on the Lake Borgne Canal in St. Bernard parish, about 12 miles down the Mississippi River from New Orleans.

It is stated that these will be the first all-steel steamships to be constructed south of Newport News.

The Alabama & New Orleans Transportation Co., in which Boston capital is largely interested, was organized about three years ago, primarily to build and operate self-propelled coal barges for the transportation of coal between the Warrior River coal fields, near Tuscaloosa, and Mobile and New Orleans. The company took over the Lake Borgne Canal, between Mississippi Sound and the Mississippi River, and established a well-equipped shipbuilding plant at the junction of the Lake Borgne Canal and the Mississippi River. A number of self-propelled barges were constructed during 1913 and 1914, and with the completion of the locks and dams in the Warrior River a large coal-carrying trade has been built up. To such an extent has this business expanded that at the present time Alabama coal dominates the New Orleans coal market.

John H. Bernhard, who comes of a shipbuilding and shipowning family in Holland, was the originator of the enterprise, but on the completion of the project he severed his connection with the Alabama & New Orleans Transportation Co. and is now engaged in developing a barge line for operation on the Mississippi River between St. Louis and New Orleans, with plans for the ultimate extension of the service the entire length of the Mississippi and on tributary streams.

GOVERNMENT REPORTS ON OIL PROSPECTS IN MISSISSIPPI.

Possibilities of Striking Oil in Commercial Quantities Are Recognized—Suggestions to Prospectors.

No oil has yet been discovered in commercial quantities in the Coastal Plain region east of the Mississippi, says a recent bulletin from the Department of the Interior. Nevertheless, the formations that produce petroleum in Louisiana extend east of that river, and no valid reason is yet known why they should not carry oil in Mississippi in some area of favorable geologic structure, such as strong anticlinal folds and domes containing sands suitable for oil storage and not too deeply buried. In order to assist in the work of finding oil in Mississippi, the United States Geological Survey made a detailed examination of a part of that State, and has published a report on the work done that contains a map showing several slight folds of the rock beds in the region including Vicksburg and Jackson. These structural features comprise a broad anticline, which is indicated, though not clearly shown, at Jackson, and two monoclinical folds, one extending eastward from Vicksburg and one near Eldorado. These features are not strongly developed, but if oil is to be

sought systematically and courageously in the State, they nevertheless deserve testing.

The shape and extent of the folds, so far as they can be inferred from the outcrops of the beds, are shown in the report, which was prepared by O. B. Hopkins and published as Bulletin 641-D, and can be obtained free on application to the Director of the Geological Survey, Washington, D. C.

The greatest public interest centers in the region near Vicksburg, and accordingly what has been called the Vicksburg monocline is the first to be tested by the drill, which, in any new region like this, is the only sure test of the presence or absence of oil or gas in commercial amounts. The most favorable part of the Vicksburg monocline, according to Mr. Hopkins, is its western end as mapped, because the fold is more strongly developed at that end farther east. In this monocline the beds at the surface are bent downward to the South, whereas those north of the line of folding lie nearly horizontal. In such a fold the line or axis along which the downward bend begins will lie a little farther north in each successively deeper stratum, so that at depths of 3000 feet or more the crest of the fold will be considerably north of the axis in the surface strata, which is located approximately by Mr. Hopkins on the map. Accordingly, if Mr. Hopkins' mapping is correct, it would appear that the well already drilled to a depth of about 3500 feet by the Mississippi Oil, Gas & Development Co. of Vicksburg, just south of the Alabama & Vicksburg Railway, two miles east of Vicksburg, where traces of both oil and gas were found, was probably located considerably south of the crest or axis in the deep strata, which should be the more promising part of the fold. In a notice issued to the press the Director of the Survey quotes Mr. Hopkins as recommending a test at a point half a mile to a mile north of the axis of the fold in the surface strata as marked on his map. In issuing the statement the Director of the Survey emphasizes the fact that, notwithstanding that traces of oil and gas were found in the hole already drilled, similar exploration in any part of the Coastal Plain east of the Mississippi must be regarded as wild-cat drilling, even if the wells are drilled where the geological structure is more or less distinctly favorable.

Oil men are urged to keep careful and accurate logs of all holes drilled in the region, as these logs may be of use in verifying or revising the delineation of the geologic structure. Drillers should watch for the hard limestone member of the Vicksburg formation, which lies beneath about 35 feet of the fossiliferous marl. This limestone should be easily recognized and should be valuable as a key rock for comparing logs and for identifying possible oil sands.

Whitewash Made of Buttermilk and Arkansas Clay.

Deposits of clay are so common that the clay resources of a State seldom attract much attention, yet clay may be put to an infinite variety of valuable uses, and its annual output in the United States is worth more than \$150,000,000. The State of Arkansas produces clay of several kinds, which are described in Bulletin 351 of the United States Geological Survey, Department of the Interior. This bulletin not only states the locations of the clay deposits of the State, but describes their composition, character, origin, occurrence and uses. The clays are classified as residual clays, clays of mechanical origin, clays and kaolins of chemical origin, and bauxite. The production in each county is considered separately, and the uses to which the clay is put are given. An interesting use has been made locally of some of the potter's clay found in Dallas county. It has been dissolved in buttermilk and boiled and used as a whitewash. When so used it gives a smooth coat of slightly bluish tint, which is said to be about as durable as a coating made with lime.

A copy of Bulletin 351 will be sent free on application to the Director, United States Geological Survey, Washington, D. C.

The Mays Manufacturing Co., Maysworth, N. C., will add 20,000 spindles, with accompanying machinery, and has awarded the contract for this new equipment. Stuart W. Cramer of Charlotte, the corporation's president, is the engineer in charge.

SIGNIFICANT EXPANSION OF ALABAMA COAL-HANDLING FACILITIES.

Birmingham Interests Purchase Entire New Orleans Business of Pittsburgh Coal-Carrying Corporations.

An important sale which will provide for shipping 500,000 tons of coal annually from Alabama to New Orleans was completed last week, when the Corona Coal & Iron Co. of Birmingham purchased the Pittsburgh Coal Co.'s and the Monongahela River Consolidated Coal & Coke Co.'s coal-carrying facilities at New Orleans. This sale involves business and equipment, such as tugboats, barges and colliers used for the bunker coal and towing trade of the Pittsburgh and Monongahela River corporations. Coal carrying will be continued under the names of the River Coal Co. and the River-Ocean Towing Co., with H. C. Donaldson continuing as manager at New Orleans. Morris Adler & Co. of Birmingham, managers of the Corona enterprise, completed the purchase. The Corona Coal & Iron Co. has also purchased more than 200 private coal cars for carrying service between Birmingham and New Orleans, thus providing ample supplies of fuel for New Orleans and steamships reaching that port.

The Corona Coal & Iron Co.'s announcement includes these statements:

"This will mean a very large increase in the sale of Alabama coal in the river at New Orleans, and it will give the steamship trade a more dependable supply of bunker coal, as the new owners have also secured over 200 private cars to be used in the transportation of coal from their Alabama mines to New Orleans.

"This large bunkering and towing equipment, together with the private railroad cars, assures steamers coming to this port a high-grade and satisfactory service, both as to towage and deliveries of bunker coal."

Russian Needs for Shoe Industry.

NEGSKY MACHINE SHOE MANUFACTORY, St. Petersburg Tavetoshnaya Street, Corner Lomanoi No. 7, Petrograd, Russia.

It would be agreeable to us to get particulars with price-lists of machines for manufacturing all kinds of foot covering and shoes; also for leather work in general. Models (illustrations), latest catalogues published showing materials for the shoe industry, such as screws, machine tacks, wooden and metal pegs for various purposes, thread and twine, paste (cream, creme) and dressing, hooks, eyelets, laces and "extract" for leather work. We would like to get catalogues of machines for making screws, preparing finishing hooks and eyelets. We are interested in sole leather; kid (chevreau), colored and black; besides calfskin, we wish "box calf," goat skin and other kinds. Have details and prices sent us on all kinds of supplies and materials for shoemaking leather-working factory.

Eleven Months of American Shipbuilding.

The United States Bureau of Navigation reports 1066 sailing, steam, gas and unrigged vessels, of 488,446 gross tons, built in the United States and officially numbered during the 11 months of the calendar year 1916, as shown in the following table.

In addition, there were built for foreigners 36 wooden vessels of 372 gross tons and 13 steel vessels of 33,265 gross tons; total, 49 vessels of 33,637 gross tons.

Classes of Ships.	Atlantic and Gulf.		Pacific.		Great Lakes.		Western Rivers.		Total.	
	No.	Gross.	No.	Gross.	No.	Gross.	No.	Gross.	No.	Gross.
Wood.										
Sailing	43	11,949	6	3,903	10	795	13	1,345	49	15,852
Steam	25	3,938	12	5,696	26	459	94	1,587	60	11,774
Gas	208	6,998	160	8,601	33	4,360	26	922	488	17,645
Unrigged	204	68,053	76	8,670					339	82,005
Total.....	480	90,938	254	26,870	69	5,614	133	3,854	936	127,276
Metal.										
Sailing	1	562	...	...	1	2,330	...	...	2	2,882
Steam	49	193,205	8	51,923	34	88,366	4	587	95	334,081
Gas	7	7,068	1	213	6	9,808	4	1,509	18	18,598
Unrigged	9	3,977	...	...	4	1,908	2	24	15	5,609
Total.....	66	204,812	9	52,136	45	102,102	10	2,120	130	361,170
General totals:										
Sailing	44	12,511	6	3,903	1	2,330	...	...	51	18,734
Steam	74	197,143	20	57,619	40	89,161	17	1,932	151	345,855
Gas	215	14,066	161	8,814	36	10,267	98	3,096	510	36,243
Unrigged	213	72,090	76	8,670	37	5,968	28	946	354	87,614
Grand total.....	546	295,750	263	79,006	114	107,716	143	5,974	1,066	488,446

NEW \$685,000 OFFICE BUILDING FOR WASHINGTON, D. C.



Work has begun on the construction of an 11-story and-basement office building at Pennsylvania avenue and 18th street, Washington, D. C., which is expected to be completed by May 1 next year. The building, illustrated herewith, is being erected by the Central

Construction Co., which awarded the general contract to George A. Fuller Company of Washington. It will be of fireproof construction, with steel frame, 214x157 feet, and will cost \$685,000. Plans and specifications were prepared by Milburn, Heister & Co., Washington.

FINANCING OF FOREIGN ENTERPRISES.

Success Attends First Year of American International Corporation.

President Charles A. Stone of the American International Corporation, 120 Broadway, New York City, has made a preliminary report to the stockholders covering the first year of its existence, and it is now published in pamphlet form. The corporation was formed to engage in financing enterprises in foreign countries which prior to the war in Europe would have gone to countries on that continent to get aid for the development of their plans. That prudence governs the operations of the Corporation is indicated by the following paragraph:

"In the initial stages of development it has not been thought best to enter into the promotion of distinctly new enterprises, but rather to take advantage of previous effort, where, by associating with ourselves those individuals and corporations most expert and successful in each particular business undertaken, we can build upon existing foundations."

President Stone further says that the Corporation

now has an effective organization in this country, with special representatives in many others, and through its affiliated corporations is in touch with most of the foreign countries with which it may expect to transact business.

The average capital employed during the period ended December 6 was \$15,841,906, and the estimated surplus earned in excess of organization expenses and operating expenses to December 1 was \$2,231,495. It is said that the appreciation in value of securities is not included in this sum except in cases where securities have been disposed of.

Since the date of organization 1230 propositions were submitted to the Corporation for consideration, of which 256 were from Europe, 347 from South America, 73 from Asia, 29 from Africa, 326 in the United States, 10 from Australia, etc. Of the total 917 were declined, but it is said that with the more complete organization of its forces the Corporation will undoubtedly be able to safely take up many more propositions, and the proportion declined will be less.

The first business undertaken was the purchase by the Corporation, on joint account with W. R. Grace & Co. of New York, of the Pacific Mail Steamship Co.; next it acquired the Allied Machinery Co. of America, which conducts an export business in machine tools; and next it engaged with others upon a contract to build water-works and sewer systems in several towns in Uruguay. It has established an office at Petrograd, Russia, to look after the many business opportunities originating in that country. It has also acquired interests in the International Mercantile Marine and in the United Fruit Co., etc.

The chairman of the American International Corporation is Frank A. Vanderlip, who is president of the National City Bank of New York, and the directorate includes J. Ogden Armour, Percy A. Rockefeller, Wm. E. Corey, Pierre S. du Pont, Joseph P. Grace, Otto H. Kahn, R. S. Lovett, James A. Stillman, Theo. N. Vail and several others.

NOT A TIME FOR QUIBBLING OR HAGGLING.

Construction of Ships for Navy Must Be Expedited—Government Should Stand Behind Contractors.

[Special Dispatch to Manufacturers Record.]

Southern Pines, N. C., December 12.

Extraordinary conditions require extraordinary methods to meet them. Only because of the extraordinary conditions which we face could such a proposal be justified with fairness to shipbuilders and steel-makers, but I believe that the present situation justifies Secretary Daniels' position just as much as if we were actually engaged in war. Indeed, our ability to keep out of war and safeguard our future may depend upon just such action as Secretary Daniels has proposed. In time of actual war the Government would, of course, immediately commandeer the entire shipbuilding facilities of the country, and no one could question its legal or moral right to do this. Why, then, should we not be justified, in view of the supreme need of building a big navy as rapidly as possible to protect us in this time of world cataclysm, to call upon steel plants and shipyards at least to give precedence to Government work over everything else.

We should, however, remember that these plants are under contract, at prices far more profitable than Government work, to deliver nearly 2,000,000 tons of shipping to American and foreign buyers, and that these plants cannot abrogate any of these contracts without heavy penalties and without causing very heavy losses to those who made these contracts in good faith and whose financial situation would in many cases be crippled by a failure to receive these ships at the time agreed upon.

The situation is a very delicate and complicated one, and is due to the failure of Congress to foresee present conditions and provide for them. I believe, however, that the emergency is so great that the Government should find a way to protect all existing private contracts and at the same time secure, even if at heavily added cost, the fullest possible co-operation of every shipyard in America and every steel plant in crowding work day and night upon the building of naval ships.

This is no time for penuriousness nor for any eight-hour-a-day labor in shipyards or steel plants, upon whose output shipyards must depend for their material.

RICHARD H. EDMONDS.

DOUBLING CAPACITY OF KINGSPORT PLANT.

Remarkable Success in First Year's Operations of Dyestuff and Chemical Corporation.

Announcing its intention to double the capacity of its plant, the Federal Dyestuff and Chemical Corporation, in operation at Kingsport, Tenn., has been advertising in the daily papers of the country an offering of a limited amount of common stock of the corporation. Asked for a statement as to the plans of the corporation, President George T. Bishop has sent to the MANUFACTURERS RECORD a letter containing the information herewith. After stating that full and definite information is not yet available, Mr. Bishop's letter says:

"From able articles previously printed in the MANUFACTURERS RECORD your readers are already pretty well informed as to the selection of a site at Kingsport, Tenn.; breaking of ground no longer ago than the middle of November, 1915, and plant construction, operation and production down to a quite recent date.

"The cases are rare where a company of any kind which has so recently commenced construction has turned out a tonnage equal to that manufactured by this corporation in 1916.

"The plant, as originally planned, is very near completion, and is expected to be entirely finished early in January, 1917. Meanwhile the experience gained during the year now drawing to a close, and developments of wide and important significance, particularly relating to dyestuffs and chemical needs in this country and elsewhere, point to the necessity and wisdom of pro-

viding for a wider scope and much larger production in this field.

"Fortunately for this corporation, with its present splendid equipment, provision for a greatly augmented output over its present capacity (possibly an increase of fully 100 per cent. in production) will mainly require the installation of additional machinery and equipment in existing departments or units, a proportionate increase in the labor employed, and provision for obtaining larger quantities of necessary raw materials.

"Competent experts are making preliminary estimates covering the various items, and before long will probably present final statements and recommendations."

\$850,000 FOR SHIPYARD IMPROVEMENTS.

President of Newport News Company Wires Outline of Proposed Betterments.

Increasing demands for the construction and repairing of ships of all classes make it necessary for the Newport News (Va.) Shipbuilding & Drydock Co. to add extensively to its facilities. Plans are now being considered for undertaking these betterments during 1917, and H. L. Ferguson, the company's president, wires the MANUFACTURERS RECORD:

"We expect to spend about \$850,000 next year in plant improvements."

Mr. Ferguson also advises the MANUFACTURERS RECORD that the improvements will include general betterments; enlargement of shops and offices; building ship shed on north side of yard; extending machine shop between present shop and boiler and forging works; extending foundry for steel castings; installing additional new machinery of a miscellaneous character; building addition to office, etc. It is also contemplated to build additional ways, this construction depending upon receiving contract for one of the battle cruisers which the United States Government will soon order.

COTTON CROP OF 11,500,000 BALES ESTIMATED BY GOVERNMENT.

Sharp Break in Prices on Exchanges When Figures Appeared—200,000 to 300,000 Bales Above Expectations.

The Crop Reporting Board of the Bureau of Crop Estimates of the United States Department of Agriculture estimates, from the reports of the correspondents and agents of the bureau, that the total production of cotton in the United States for the season 1916-17 will amount to 5,506,896,000 pounds (not including linters), equivalent to 11,511,000 bales of 500 pounds gross weight.

This is 200,000 to 300,000 bales more than the "talent" in the cotton market centers had counted on, and a violent break in prices occurred on the publication of the Government figures Monday afternoon of this week. Prices dropped \$7 a bale in eight minutes on the New York Exchange, and while there was some recovery later, the market closed there and elsewhere 90 to 95 points below the opening quotations.

The estimated production, with comparisons, by States, follows:

State.	Pounds Lint.	1916.	1915.	5-Year Av.	Price per Pound
		1916.	(Census.)	(Census.)	(December 1, 1915.)
Alabama	251,055,000	525,000	1,029,539	1,499,984	19.5
Arkansas	383,040,000	800,000	953,965	1,213,784	20.5
California	210,496,000	440,000	341,063	379,924	19.1
Florida	1,808,225,000	3,775,000	3,227,480	4,144,676	19.4
Georgia	548,112,000	1,145,000	816,002	928,320	19.6
Illinois	180,849,000	378,000	301,430	364,244	19.5
Indiana	29,704,000	62,000	47,999	72,198	19.0
Iowa	399,389,000	835,000	639,636	1,013,794	19.0
Kansas	28,716,000	60,000	28,551	19,333	20.0
Louisiana	3,827,000	8,000	7,149	7,698	19.6
Mississippi	3,827,000	8,000	7,149	7,698	19.6
Missouri	3,827,000	8,000	7,149	7,698	19.6
Nebraska	3,827,000	8,000	7,149	7,698	19.6
Nevada	3,827,000	8,000	7,149	7,698	19.6
New Mexico	3,827,000	8,000	7,149	7,698	19.6
New York	3,827,000	8,000	7,149	7,698	19.6
North Carolina	3,827,000	8,000	7,149	7,698	19.6
Ohio	3,827,000	8,000	7,149	7,698	19.6
Oklahoma	3,827,000	8,000	7,149	7,698	19.6
Oregon	3,827,000	8,000	7,149	7,698	19.6
Pennsylvania	3,827,000	8,000	7,149	7,698	19.6
Rhode Island	3,827,000	8,000	7,149	7,698	19.6
South Carolina	3,827,000	8,000	7,149	7,698	19.6
South Dakota	3,827,000	8,000	7,149	7,698	19.6
Tennessee	3,827,000	8,000	7,149	7,698	19.6
Texas	3,827,000	8,000	7,149	7,698	19.6
Utah	3,827,000	8,000	7,149	7,698	19.6
Vermont	3,827,000	8,000	7,149	7,698	19.6
Virginia	3,827,000	8,000	7,149	7,698	19.6
Washington	3,827,000	8,000	7,149	7,698	19.6
West Virginia	3,827,000	8,000	7,149	7,698	19.6
Wisconsin	3,827,000	8,000	7,149	7,698	19.6
Wyoming	3,827,000	8,000	7,149	7,698	19.6
United States	5,506,896,000	11,511,000	11,191,830	14,259,231	19.6

Total production was 16,134,930 bales (500 pounds gross) in 1914; 14,156,486 bales in 1913; 13,703,421 in 1912; 15,692,701 in 1911, and 11,608,616 in 1910.

The price per pound to producers December 1 in 1914 was 6.8 cents; 12.2 cents in 1913; 11.9 cents in 1912; 8.8 cents in 1911, and 14.1 cents in 1910.

128,000-ACRE LIVESTOCK FARM.

Southern Capitalists to Graze 20,000 Cattle and 10,000 Sheep on Georgia Ranch.

In connection with recent announcements of meat-killing and packing plants to be established throughout the South, it is of interest to note that an extensive cattle and sheep ranch will be established in Georgia. This enterprise is being undertaken by the Georgia Land & Livestock Co. of Savannah, and it will utilize 128,000 acres of land in McIntosh and Liberty counties, Georgia. The tract has been fenced and the company expects to graze 20,000 head of cattle and 10,000 head of sheep. It has 20 miles of deep-water front, including a natural harbor (on the Atlantic coast) with a depth exceeding 20 feet at mean low water. On the property it is estimated there are 500,000,000 feet of standing timber, 4,500,000 cross-ties and 500 crops of turpentine. The Seaboard Air Line Railway traverses the land north and south, while the Georgia Coast & Piedmont Railway extends east and west, there being nine stations for these railroads. A 2000-acre farm is now being planned to grow ensilage to feed stock during four months of the year, and 100 silos will be built to store this cattle food. The land is said to be especially adapted for grazing livestock and for growing sea-island cotton, short-staple cotton, corn, oats and vegetables.

Well-known Southern capitalists form this company, of which J. R. Paschall of Richmond, Va., is president. Messrs. E. M. Thorpe of Townsend, Ga.; M. P. Burwell of Warrenton, N. C., and C. C. Reed of Richmond, Va., are the vice-presidents. The directors are: H. C. Stuart, Governor of Virginia, Richmond; B. N. Duke of New York and Durham, N. C.; Warner Moore, T. S. Winston, C. B. Boice, James T. Estes, T. M. Carrington, C. C. Reed and J. R. Paschall, all of Richmond; E. M. Thorpe of Townsend, M. P. Burwell, R. P. Boyd and V. F. Ward, all of Warrenton, N. C.

From the City of Mexico.

ELECTROMOTOR, S. A., 43 Av. Isabel La Catolica, City of Mexico.

We have written to several addresses from the MANUFACTURERS RECORD, and satisfactory results have been forthcoming. We have come in contact, through the United States Consular Service Department, with quite a number of manufacturers, so that at present we are acquainted with a sufficient number of sources of supply for our actual business needs. We are established since November, 1913, and are widely known throughout the republic, of which in normal times we covered each and every section by a competent staff of salesmen and engineers.

Machinery, Oils, Etc., for India.

PARIKH FRIENDS & Co., Mandvi's Street, Ahmedabad, India.

We are interested in the import of a plant of machinery for manufacturing steel and iron needles of various sizes and types for hand and machine sewing, as also complete plant of machinery for making milk sugar from separate milk after casein is taken out, and in the export of Indian products, such as casein, ivory chips, various oils, various seeds and corns, etc.

Mill Capitalized at \$250,000.

The Pinkney Mills Co., Gastonia, N. C., has been incorporated with \$250,000 capital by R. G. Pinkney, S. M. Boyce, W. G. Pinkney, C. B. Armstrong and others, to manufacture cotton products.

News and Views from Our Readers

Common Law of Nations Cannot Be Repealed While Civilization Itself Exists.

CHAS. E. CHIDSEY, Pascagoula, Miss.

The little editorial on the first page of the MANUFACTURERS RECORD for this week, "Exchange of Gifts," goes right home, and should meet the approval of everyone that has not yet lost his reverence for justice and truth. The sinking of the Lusitania and the brutal murder of the innocents was by the law of nations an act of piracy.

Several times in the columns of the New York Tribune and the MANUFACTURERS RECORD during the past year I have stated that the law of nations was the "common law of nations," and that an offense against this law was an offense against all nations, and it was incumbent upon each and every nation to preserve this law inviolate. At the time of making this statement I challenged the bar of the United States to contradict it, but up to the present writing that challenge has not been accepted.

Even the nations of classical antiquity recognized and respected the law of nations, Thucydides calling it "kata ton pasi nomon kathestota," "a law established for all," that is, a universal law, and a fragment of Euripides preserved by Stobaeus, the poet, speaks of the "koinoi tes Hollados nomoi," "the common law of the Hollanos," that is Greeks, while the Romans, with their genius for concrete statement, crystallized it into the phrase, "jus gentium," "the right" of nations. The editor will remember that the Romans used the word "jus" to signify their unwritten or common law and "lex" for the written or statute law.

Not until 1914 was the existence of this law questioned, and then by Germans and philo-Germans in this country, and when Germany announced that the law of nations must yield to "military necessity" a whole chorus of noisy whelps began to bark their approval; and yet in spite of this the law of nations still exists, and it cannot be revoked by

The dull sneer of self-loved ignorance, as it is the common law of nations, and when it ceases, civilization itself will perish.

That the violation of the law of nations as to Mexico by this nation, and its condoning of the violation of this law by Germany, is not winning us any friends is to me self-evident. When the war comes to an end we will perhaps learn that in sowing the wind we must also reap the whirlwind.

Wherein the Dawn of a Better Day for Alabama Farming Is Foreseen.

W. F. MAXWELL, Hayneville, Ala.

Some sections of Alabama have "gotten on the map" and are attracting the attention of people interested in stock raising, but there are still localities where the light of reason has not yet penetrated. Lowndes county, in the section surrounding Hayneville, its county-seat, is about the center of darkness.

"Fo' de war" this was one of the prosperous communities, where fine horses drew elegant carriages, occupied by beautiful women and handsome men, to churches or social functions, while the overseer and the sturdy blacks furnished the sinews of war—the national flower of the Confederacy, cotton.

There are five to ten-mile stretches of country that one may go through without meeting a white person, save perhaps occasionally a "rider" or overseer for some absentee landlord.

The lands, naturally rich, have been cultivated to cotton almost exclusively for generations, with only here and there a field of corn, a patch of sugar millet or cane, sweet potatoes, rice or the proverbial collard. Nevertheless, these lands, abused and neglected as they have been, will without fertilization or any of the more modern methods of soil improvement produce an average of perhaps a half-bale of cotton or 25 to 40 bushels of corn to the acre.

I attribute to the careless and slothful methods, known in more progressive communities as land robbing, the fact that these lands have not deteriorated more. The lands are never plowed in the fall, seldom

before February or March; the grass and weeds are allowed to grow more or less all the year, and they, rotting in the ground, afford a substitute for cover crops and improvers and retard washing and deterioration to a certain extent; the lands never or seldom being plowed deeper than three to five inches, the pan is seldom broken, and the farm underneath is still there.

There are thousands of intelligent farmers working their heads off and experiencing the discomforts of inclement or rigorous weather of the less favored sections while the negro of the South is "making a living," working an average of perhaps four or five hours a day the year 'round. They rise from habit about daylight, and under press of spring plowing reach the fields by sun-up; their breakfast follows later. They lie in the shade for an hour or two at midday and quit in time to do a turn or two at home before sundown. That is the strenuous part of the year, perhaps February and March, and then the work tapers off through planting time to the middle of May.

The women do most of the hoeing and other lighter work, and unless rushed, the whole family leave the field by 3 or 4 o'clock.

On Fridays the women stay home to wash and on Saturday the whole family goes to town, Saturday being accepted generally as a holiday. On Sunday they ride their plow mules 5 to 15 miles, visiting or to church.

A few of the more progressive whites are going in for dairying or stock raising on a small scale.

Grass grows abundantly for grazing and hay; Bermuda and Johnson grass are the most general here; though it is in the lime belt, where alfalfa and other legumes flourish when planted, but little attention has been given to this class of farming in this immediate vicinity.

Cattle graze in the open for 9 to 11 months in the year, and for the entire 12, where some provision has been made to "spell" the wild or natural grass.

The negroes are raising a few hogs for home use; where they have pasturage they are fed little or nothing except when put up to fatten, as there is abundant forage to sustain life.

This country has been fairly prosperous heretofore, but due to the advent of the boll-weevil cotton fell far short last year, and owing to storms and rains this past summer, cotton was almost a complete failure and corn in the aggregate went far below the average; hence practically all the younger negroes have gone to the mines or elsewhere to get work. Many will never come back, and there will be—is now—an unprecedented scarcity of labor for agricultural purposes and a consequent panic among the landowners, many of whom think they see the end of prosperity along with the loss of these negroes and cotton and are anxious, or forced by circumstances, to dispose of their holdings at whatever price they can get.

I see this as the dark hour before dawn and a future era of success and profit more dependable, greater and more desirable than has ever been known here.

The same uplift that brought Texas onto the map, cattle; the Eastern Carolinas, strawberries, small fruits and vegetables; Florida, winter vegetables, etc., is bound to gravitate this way and pour gold into the coffers of those wise enough to become pioneers, and in a few years cattle, hogs, sheep, peaches, pecans, figs and such profitable crops will take the place of king cotton.

Wants Information as to Stockyards Business.

CHAUNCEY SMITH, Special Agent Southern Bell Telephone & Telegraph Co., Atlanta, Ga.

We would like information in regard to the stockyards business, the practices in vogue as to the methods of handling livestock in these yards and the charges usually made.

We are actively following up the present movement for the increased production of livestock in the Southeast and the coincident development of packing plants and stockyards, believing that whatever helps the general development of the community will necessarily redound to the advantage of the public service corporations serving it, and we are accordingly collecting and distributing wherever we think it will be of service in-

formation bearing on this subject. In regard to stockyards there seems to be no information extant as to the character of plant required and methods of handling business.

Of Greater Benefit Than All Other Publications Combined.

W. A. LENEAVE, Manager Southern Timber Co., Crewe, Va.

Enclosed I hand you my check for \$4 covering my subscription to the MANUFACTURERS RECORD. I am sure that I get more lasting benefit from reading the MANUFACTURERS RECORD than all other periodicals, newspapers, etc., combined, and have reached a point where I feel that it is impossible to do without the MANUFACTURERS RECORD.

Doing a Great Work for the South.

J. E. COBURN, Mineral and Timber Lands, Bryson City, N. C.

I consider the MANUFACTURERS RECORD the best publication I get, and I would regret very much to have to do without it. You are certainly doing a great work for the South.

I am enclosing you my check for \$4 for next year's subscription in accordance with bill rendered, wishing you continued success.

Wants Machinery for Making Knitting Needles.

E. B. GRESHAM, Box 253, Hendersonville, N. C.

Please give me the address of some firms from whom I can buy machinery to make knitting needles.

Central and South American Trade.

O. WYLD OSPINA & Co., Sur. No. 4a, Guatemala, C. A.

We offer our services for negotiating commercial dealings. Our partner, Osberto Wyld Ospina, enjoys an extensive clientele as agent for foreign house. He has handled many important affairs for them, so that we feel well prepared to give satisfactory attention to matters confided to us. We act as agents for foreign traders, buying, selling and exporting merchandise; show samples, exhibit catalogues, obtain orders and remit money to principals. Commissions arranged for at time we take charge. We operate throughout Central America and in Venezuela, Colombia and Ecuador, making arrangement with firms confiding their business to us for periodical tours for advertising and to get orders. Charges and expenses for trips, commissions agreed upon before hand and also the manner in which samples are to be forwarded to us so as to avoid or reduce custom-house and other outlays. We negotiate the export of products of this country, such as coffee, sugar, timber, caoutchouc, gum, hides of beef cattle and deer, leather. We register trade-marks and secure patents for the protection of manufacturers.

To Kill and Pack Meat.

The A. D. Davis Packing Co., S. A. Darnell, engineer, Mobile, Ala., will establish a plant for killing and packing meat at Prichard, near Mobile. Outlining plans for this enterprise, the company writes to the MANUFACTURERS RECORD:

"The plans for our new packing plant are still in the hands of the architects, Henschien & McLaren, Chicago, and no contract for erection or machinery has been let. We propose to erect a brick and concrete building, 72x167 feet, two stories and basement, with separate engine and boiler-house, 35x70 feet. This is also to be built of brick and concrete. The approximate cost of these buildings will be \$30,000 without equipment. Will ask for bids on building and equipment about the 15th of January."

The Iron, Steel and Metal Trades

UPWARD PRICE MOVEMENT IN STEEL CONTINUES.

Quotations on Sheets, Railroad Spikes and Other Products Again Advanced—Heavy Buying of Railroad Supplies—Pig-Iron Values Higher.

New York, December 11—[Special.]—The expected termination of the present uptrend in the steel market has not yet come to pass. As each week goes by one hears the opinion frequently expressed that "the end of the great upward movement in steel prices is nearing its end, and that a break in the market must come before long." And yet prices continue to go higher and higher and the expected "break" appears to be as far off as ever. The strange thing about the entire present price movement is that these high prices do not by any means represent the market as it actually exists. The prices are "strictly nominal," or, in other words, the mills have no products to sell at the prices they quote. Why, then, are prices quoted at all upon products that are "out of the market?" is a question that one would naturally ask. Just now this perplexing question does not appear to have any answer.

During the past week black and galvanized sheets were advanced \$5 a ton, iron, steel and line pipe \$4 a ton, iron bars \$7 a ton, terne plate 25 cents a base box, and railroad spikes to 3.25 cents a base box. A close scrutiny of the steel and iron situation fails to show any signs of weakness. Prices of pig-iron are advancing constantly, steel prices at frequent intervals, while the steel mills as a whole are placing more tonnages on their books than they are taking off by making shipments. Steel prices advanced on an average of \$6.40 per net ton in the past four weeks, against one-half as much in the preceding four weeks. The next four weeks, however, are expected to show a tapering off in the present advance movement. The holiday period is expected in steel trade circles to put a damper on the excitement, as it has so often done in the past. Steel prices are largely nominal, however, many sellers having no open quotations, and treating each inquiry as a separate proposition.

Railroad buying continued very heavy last week. In the past few days contracts for about 200,000 tons of rails were closed at Chicago and New York, including 32,000 tons for the Illinois Central Railroad, 40,000 tons by the Chicago, Milwaukee & St. Paul and 60,000 tons for the Atchison, Topeka & Santa Fe. About half of the tonnage for the latter railroad will be furnished by the Colorado Fuel & Iron Co. Since the second \$5 advance in steel rails, on November 5, it is estimated that about 500,000 tons of rails have been put on the books of the mills for 1918 delivery. Since August 1 freight cars ordered total 100,000, the largest amount of car buying in such a period for years.

Authentic reports are to the effect that substantially all the war steel that can be made throughout 1917 is already under contract, indicating that the mills are to make as much war steel throughout next year as they have since the war began. Approximately all the war steel business is now in the form of large forging billets for large shells. For some time past there has been no business placed in large rolled rounds, and nearly all the tonnage previously ordered has now been made and shipped.

Advices from Toronto, Canada, on Saturday, said to be reliable, are to the effect that English shell contracts in the United States virtually all run out within the next six months, and most of them within three months after the first of the year. They will not be renewed. In an interview J. W. Flavell, chairman of the Imperial Munition Board of Canada, said that Canadian munition manufacturers would be expected to fulfill their 1917 contracts. "Of course, Great Britain will continue to purchase copper, brass, steel and other raw materials from the United States," he said, "but she will not purchase any more of the finished shells."

The condition in the railroads generally has become much worse in the past few days. The main line of the Pennsylvania Railroad is particularly congested, and there has also been very serious congestion on the Monongahela division. While no official announcement

has been made, there is every probability that within the next two or three days the lines of the Pennsylvania Railroad system east and west of Pittsburgh will place embargoes against each other. The steel mills, therefore, are having still more trouble in effecting shipments of their products.

The principal producers of refined iron bars are now quoting carloads at 3.25 cents and less than carloads at 3.50 cents. This represents an advance of \$7 a ton on carloads and \$10 a ton on less than carloads. The iron mills have not been loading up to any extent, and have their order-books in fairly good shape, so that they can make moderately early deliveries. As a rule, they are selling only to their regular customers, finding that they are kept well filled by doing so, while their customers are better satisfied.

New prices on terne plate were named last week by the American Sheet & Tin Plate Co. The new prices represent an advance of 50 cents a case or 25 cents a base box. The company is entirely out of the tinplate market, but it is still a seller of terne plate in a limited way.

The sheet market daily gained strength last week, and sizable premiums appeared for prompt deliveries. Sheets are scarce, and one cause of the scarcity is that three or four large interests are making hardly any of this product, as their steel is diverted to other uses. A sale of two or three carloads of ordinary black sheets for shipment from stock was reported on Friday last on a basis of 5 cents. The minimum price of the leading interest is 4.25 cents, and it is selling only to regular customers, if at all, while among the independents the lowest price is 4.50 cents.

The National Tube Co. sent out new lists on standard steel pipe, line pipe and oil country goods last Wednesday morning. Standard and line pipe are advanced two points, or about \$4 a ton, and oil country goods in proportion. The new basing discount on standard steel pipe is 66 per cent. Bookings by the pipe mills were very heavy last week. The advances have seemed to have had no effect upon the demand from consumers. It is the opinion of the trade that the independents made their advances as of December 1, although they did not all send out discount cards at that time.

The spike market, which has long been stationary, started suddenly to advance last week. Spikes had been at 2.65 cents for a long time, and for a while this price was partially nominal, as there were sellers at 2.60 cents. Meanwhile steel bars kept advancing, and there was a time when spikes were 2.65 cents and steel bars, the raw material, at 2.90 cents for delivery at mill convenience. Then the market started advancing last week, going up first to 2.90 cents and then to 3.25 cents. Chicago producers were low sellers at 2.75 cents, although the market there has now been put up to 3.50 cents. Apparently it was the Chicago market that has been holding things down. At any rate, when the Pittsburgh producers learned of the Chicago advances they promptly followed suit.

The scrap steel and iron trade is highly excited. Repeatedly in the past week dealers went through the experiences of effecting a sale at a stiffly advanced price, only to find the market still higher the next day, and such experiences are now causing them to be reserved about selling at any price. Consumers are taking considerably more interest in the market, but on account of sellers holding back the total turnover is not particularly large. The railroads have been holding back material on their recent lists, particularly rails. Evidently they feel they should get more money for old rails when new rails have gone up \$10 a ton this year.

Re-rolling material is particularly high, rails and axles bringing almost any price. The report that \$34 was paid for re-rolling rails has been confirmed, and car axles, either iron or steel, are said to have brought as high as \$60. Never, in the long history of the scrap trade, has there been such a widely excited market, such rapid advances or such a wide range of prices.

As regards the general steel situation, it is difficult to see any weakness in the situation, or how the market can continue to move upward as it has been doing of late. Steel prices are extremely high, and everybody feels that there must be some limit beyond which they cannot go, but no one can undertake to suggest even broadly where the limit may be found. It is generally

recognized that the mills cannot continue doing business at the present rate, as tonnage has been piling up on books at a rapid rate. Even with several months of bookings below shipments there would still be a large aggregate.

The demand for pig-iron last week was as strong as ever, despite the advancing prices. Sales of 80,000 tons of steel-making iron were made for export within the past few days, including 50,000 tons of Bessemer, 20,000 tons of basic, and moderate tonnages of foundry grades. J. P. Morgan & Co. is understood to have purchased most of the Bessemer iron at \$35 to \$37 valley furnace. Sales of 1000-ton lots of low phosphorus have been made recently at \$48 to \$50 per ton, and there are rumors of sales at much higher prices.

There is less activity in buying of foundry iron by domestic consumers, following the unprecedented sales in the last 60 days. Numerous small sales of foundry iron were reported on Friday at \$29 to \$30 per ton for No. 2 at Eastern Pennsylvania furnaces, and at \$30 to \$32 a ton at Buffalo.

The production of pig-iron in November was 3,311,811 gross tons, or about 110,394 tons a day, as compared with 3,508,849 tons, or 113,189 tons a day in October. When the car shortage and furnace coke troubles are considered, this production is remarkable. It is estimated that the capacity of the 322 furnaces in blast on December 1 was 108,127 tons a day, as against 109,022 tons a day for the 325 furnaces in blast on November 1.

(Dealers' average buying prices for gross tons.)

Bessemer billets (nominal).....	\$55.00—\$57.00
Open-hearth billets (nominal).....	55.00—57.00
Open-hearth sheet bars.....	57.00—62.00
Bessemer sheet bars (nominal).....	57.00—62.00
Forging billets.....	75.00—
Wire rods.....	70.00—
Tank plates.....	3.50—4.50
Steel bars.....	2.90—
Refined iron bars.....	3.25—
Rails.....	47.00—48.00
Steel hoops.....	3.25—
Cold-rolled strip steel.....	6.50—7.00
Sheets, No. 28 gauge.....	4.25—5.00
Galvanized sheets.....	6.00—6.50
Wire nails, No. 28.....	3.00—
Cut nails.....	3.00—
Plain fence wire, base.....	2.50—
Barb wire, galvanized.....	3.85—
Railroad spikes.....	3.65—

Pig-Iron.

Bessemer, Pittsburgh.....	\$35.95—\$37.95
No. 2 foundry.....	30.95—31.95
Basic, valley.....	30.95—32.95
Gray forge.....	29.95—30.95
Basic, Philadelphia.....	30.00—32.00
No. 2 foundry, Northern.....	29.75—31.75
Low phosphorus.....	50.00—52.00
No. 2 foundry, Buffalo.....	35.00—
No. 2 South, Cincinnati.....	25.90—26.90
Northern foundry, No. 2, Cleveland.....	30.90—31.90

Scrap-Iron and Steel.

Heavy melting steel.....	\$26.00—\$27.00
Old steel rails, re-rolling.....	32.50—34.00
Old iron car wheels.....	24.00—26.00
Old steel car wheels.....	30.00—31.00
Bundled sheet.....	15.00—15.50
Low phosphorus.....	31.00—33.00
No. 1 cast.....	21.50—22.50
Heavy cast scrap.....	19.00—20.00
No. 1 railroad wrought.....	31.00—32.00
Cast borings.....	11.75—12.25
Machine-shop turnings.....	10.75—11.25
Steel car axles.....	50.00—60.00
Iron car axles.....	50.00—60.00
Railroad malleable.....	22.50—23.50
Grave plate.....	15.00—16.00

METAL MARKETS BECOME IRREGULAR.

Rumored Sales of 38-Cent Copper Not Confirmed—Continued Demand, With Advancing Price Tendencies—Long-Delayed Advance in Lead Values—Spelter and Tin React.

New York, December 12—[Special.]—The "reported" sales of copper at 38 cents on Thursday of last week created momentary excitement in metal circles, but when the reports came to be investigated they could not be confirmed.

Domestic and foreign consumers were almost constantly in the market for copper last week to cover requirements over the first half of next year, although not in as large numbers as heretofore. As producing interests have sold practically 90 per cent. of capacity for the first half of next year, based upon an output of 200,000,000 pounds per month, it was difficult to secure all the metal that was required and consequently fractional advances were paid for the moderate amounts available.

Exports last month were only 21,433 tons, equivalent to a little over 48,000,000 pounds, but foreign re-

quirements must not be based upon this decreased movement. Shipments were cut down only because freight room was not available on outgoing ships. A considerable tonnage which left the smelters in November will be reflected in the December movement. Sales of refined copper last month were, next to those of September, the largest for any single month in the history of the industry. The November sales were slightly in excess of 600,000,000 pounds. The output of refined copper last month was between 185,000,000 and 190,000,000 pounds, the falling off at some plants being compensated for with an increase at other works.

On Tuesday afternoon of last week the American Smelting & Refining Co. advanced its price of lead \$10 a ton, or to 7.50 cents New York, which was immediately followed by independents raising their prices to 7.75 cents for late December and early January deliveries and 7.62½ cents for late January and early February deliveries. The advance in the prices did not bring any increase in the supplies on the market, however, and buyers were only able to obtain small quantities of the metal at these higher figures. The scarcity of lead is a remarkable illustration of the increase in domestic trade through the prosperity of the country, and the export trade in lead and the munition business is now less of a factor than it has been at any time this year.

The spelter market relapsed into a dull and weak state last week, while dealers made constant efforts to

sell by under-quoting producers on December and first quarter deliveries. The latter, naturally, have been blamed for depressing the market, although it is the opinion in some quarters that consumers have changed their views regarding the expected high prices for spelter and the depletion of supplies on the market.

The situation in spelter today is just the reverse of what it was a short time ago, when the price was advanced rapidly on purchases by dealers and consumers, for now that the activities have been switched over to the selling side the market is declining as fast as it had previously advanced.

The principal trouble with the spelter market is that it is too susceptible to sentiment, and sellers who would not take the orders that were to be had a week or two ago are now crowding spelter on the market when there are no orders. The same applies to buyers also, and it can truthfully be said that the spelter market these days, as far as the fluctuations of prices are concerned, is based 75 per cent. on sentiment and 25 per cent. on realities.

The tin market last week was very dull, although there was not enough business offered to test sellers. The limits received from abroad continue very limited in quantity, and sellers are disposed to follow the decline reluctantly. This might change their attitude if they saw that by so doing round lots of futures could be sold, but the larger consumers seem comfortable and determined at present to look on.

THE WEEK'S PRICES.

	Copper.		Lead.		Spelter.		Tin.
	Lake.	Electrolytic.	A. S. & R. Co.	Ind.			
Monday, Dec. 4.	33.50-34.00	34.50-35.00	7.00	7.37½-7.50	12.92½-13.17½		44.87½
Tuesday, Dec. 5.	33.75-34.25	35.00-35.50	7.50	7.50-7.75	12.62½-12.92½		44.50
Wednesday, Dec. 6.	34.00-34.50	35.00-35.50	7.50	7.62½-7.75	12.55-12.67½		44.00
Thursday, Dec. 7.	34.50-35.00	35.25-35.75	7.50	7.75-8.00	11.92½-12.17½		43.80
Friday, Dec. 8.	34.50-35.00	35.25-35.75	7.50	7.75-8.00	12.05-12.17½		43.80

Birmingham Pig-Iron Producers Have Practically Sold Out Their 1917 Make.

Birmingham, Ala., December 9.—[Special.]—There has been a lull in the pig-iron market the past week, due to the fact that producers have practically sold their entire 1917 make. Some of the furnace companies have flatly withdrawn from the market for the balance of the year, and others have sold all their expected make except 20 to 25 per cent., which is being held for expected advance in the market between this date and the middle of next year. Some sales of spot iron are being made at prices ranging from \$23 to \$24 per ton at the furnaces, while \$22 to \$23 per ton is being asked for any iron that is being offered for the last half of next year. The make of pig-iron for the month of November showed a tonnage slightly under that for the month of October. However, with the prospects for December make the entire year of 1916 will round up practically 2,750,000 tons of iron, against 2,049,453 tons for the year 1915. At the present rate of production, and under present conditions, the figures for the year 1917 will be more than 3,000,000 tons, and considerably more should there be blown in three or four additional stacks which have been idle for the past several years. Should there be provision made for sufficient raw materials, it is likely that these stacks will be blown in before the end of the first half of next year.

The directors of the Sloss-Sheffield Steel & Iron Co. spent the entire week in the district going over their various coal, coke and furnace properties. The officials of the Republic Iron & Steel Co. were also in the district going over that company's properties. During the coming week the officials of the American Steel & Wire Co. will visit the district to make a tour of inspection of its large plant at Fairfield, near Ensley.

The acute situation which has arisen in the coal market on account of lack of railroad equipment has created renewed sentiment in favor of Warrior River coal shipments to Mobile and New Orleans. During the past week the city of New Orleans decided to put its city plant on fuel oil because satisfactory arrangements could not be made with Birmingham coal dealers as to delivering coal to their plants in New Orleans. The De Bardeleben Coal Co. is preparing to open a new mine on the Warrior River at a point to be called Warriwer. The mine will have a capacity of 800 to 1000 tons per day, and the mine will be ready to make shipments within 30 to 60 days. The De Bardeleben company has excellent facilities at both New Orleans and Mobile for the handling of bunkerage coal. By

reason of present uncertain car supply, and other factors in general, producers of coal are confidently expecting the price of ordinary steam coal for 1917 contract to be as much as \$2 per ton at the mines.

The coke situation has not been relieved by any increase in output. The Imperial Coal & Coke Co., which has mines located at Bradford, Ala., has announced its intention of putting in commission 100 beehive ovens immediately after the holidays. These ovens will produce between 45,000 and 50,000 tons of coke per annum, and the entire output has been contracted for 1917 to Mexican smelter and other interests.

Spot foundry coke is selling for \$6 to \$8 per ton f. o. b. cars at the ovens in the Birmingham district, and furnace coke, wherever available, at \$4 to \$4.50 per ton at the ovens.

Following are producers' and dealers' prices per gross ton f. o. b. cars plants:

PIG-IRON.

No. 1 foundry and soft.	\$21.50 to \$22.00
No. 2 foundry and soft.	21.00 to 21.50
No. 3 foundry.	20.50 to 21.00
No. 4 foundry.	20.25 to 20.75
Gray forge.	19.75 to 20.25
Basic.	21.00 to 23.00
Charcoal.	26.00 to 27.00

OLD MATERIAL.

Old steel axles (net ton).	\$35.00 to \$36.00
Old steel rails.	20.00 to 21.00
No. 1 wrought.	20.00 to 21.00
Heavy melting steel.	19.00 to 20.00
No. 1 machinery.	18.00 to 18.50
Car wheels.	16.00 to 17.00
Tram car wheels.	15.00 to 16.00
Stove plate.	12.50 to 13.00
Shop turnings.	10.00 to 11.00

\$200,000 Absorbent Cotton Mill.

A \$200,000 mill for manufacturing absorbent cotton will be built at St. Louis by John T. Milliken & Co. The building will be a two-story 164x94-foot structure, and it will be equipped with machinery for a daily capacity of 4000 pounds of absorbent cotton. The raw cotton will be cleaned, boiled, bleached, neutralized, sterilized and boxed for shipment.

Road Contract Awarded at \$100,000.

A \$100,000 contract for constructing roads in Volusia county, Florida, has been awarded by the Volusia County Commissioners, offices at De Land, Fla. This contract has been awarded to F. G. and A. C. Proudfoot of Tampa.

RAILROADS

[A complete record of all new railroad building in the south will be found in the Construction Department.]

MERIDIAN TO PENSACOLA.

John T. Schley of Mobile, S. A. Neville of Meridian and Others Planning a Railroad.

The Meridian & Bigbee Railway Co. has been chartered at Meridian, Miss., for the construction of a railroad from that city to Myrtlewood, Ala., on the Tombigbee River, 47 miles distant. Myrtlewood is a terminus of the Louisville & Nashville Railroad, and this would make possible a through line to Selma and Montgomery. The men identified with the proposition are those who have been concerned in it under the name of the Meridian & Deepwater Railroad, which title is now abandoned. The incorporators are Sam A. Neville of Meridian, John T. Schley of Mobile, R. W. Harris and C. J. Currie.

While Myrtlewood is the objective point of the new road, at present it is contemplated to later extend it southward to Pensacola, Fla., about 130 miles farther. It is hoped to complete the entire road in about three years.

The parties interested are all officers of the Meridian & Memphis Railway, which now reaches west from Meridian to Union, and Sebastopol, Miss., 45 miles, an extension having just been completed to the latter point, under a new charter—the Jackson & Eastern Railway Co.—which permits them to continue construction to Jackson, Miss., about 50 miles beyond Sebastopol. A railroad running from Jackson up the Pearl River Valley has been discussed for some time, and it seems probable that this company will construct it.

BURLINGTON-SANTA FE'S NEW MISSOURI LINES.

Roads to Have Joint Use of Kansas City-St. Louis Tracks, Owned Individually.

The Chicago, Burlington & Quincy Railroad Co. will build a line 35 miles long from Monroe City to Moberly, Mo., which will be part of the general plan in connection with the Atchison, Topeka & Santa Fe Railway Co., under which the latter will run trains to and from St. Louis, and the Burlington will use the Santa Fe line in and out of Kansas City. The Atchison, Topeka & Santa Fe Railway proposes to build a line from Carrollton to Mexico, Mo., about 95 miles, which is to be included in the arrangement. This latter will be constructed via Moberly, and it is designed to give the Santa Fe a route to St. Louis, which it does not now possess, and the line which the Burlington plans to construct will afford it, in connection with the Santa Fe, a more direct route between Chicago and Kansas City than its present line affords. From Mexico the Santa Fe will use the Burlington to St. Louis and from Moberly the Burlington will use the Santa Fe tracks to Kansas City.

TEXAS RAILROAD DEAL.

San Antonio, Uvalde & Gulf May Now Be Further Developed.

John T. Milliken of St. Louis has purchased at private sale for \$785,000 an issue of \$3,647,000 of first mortgage bonds of the San Antonio, Uvalde & Gulf Railway, according to a report from St. Louis, and further development of the railroad enterprise may be expected. The road is in the hands of receivers, and the bonds, it is said, were held by the National Bank of Commerce of St. Louis as security for a debt of the Bankers' Trust Co., which promoted the railroad. The line runs from San Antonio south to Pleasanton, Tex., where it splits into two divisions, one running southwest to Carrizo Springs, 158 miles from San Antonio, and the other southeast to Corpus Christi, 149 miles from the same city. There is a branch from Crystal

City not far from Carrizo Springs to Uvalde, 40 miles. Altogether there are 315 miles of line. The offices are at San Antonio, and Duval West and A. R. Ponder are the receivers, the latter being also general manager. The bonds purchased constitute more than four-fifths of the entire issue.

"FOUNDER OF GULFPORT" DEAD.

Capt. J. T. Jones' Extensive Work Now Being Cared for by His Daughter.

Capt. Joseph T. Jones, president of the Gulf & Ship Island Railroad, and also of the Gulfport & Mississippi Coast Traction Co. and the First National Bank of Gulfport, Miss., died last week at his home in Buffalo, N. Y., after six months' illness. His business life began in the oil regions of Pennsylvania soon after the end of the Civil War, but he has been for years engaged in large milling and manufacturing interests at Buffalo. During the last 10 years or more his principal interest has been at Gulfport, Miss. Of his activities there the Buffalo Evening News says: "He developed a deep-water harbor which opened the port to ocean commerce and he developed railroad connection with the interior. Gulfport itself he built from a hamlet into a city of 15,000 inhabitants with a fine hotel and public buildings. Eight years ago, when failing health required withdrawal from the supervision of his great interests, his son, Joseph Albert Jones, assumed the entire management, bringing to the task unusual and remarkable business ability, but his sudden death, six years ago, dropped the burden back on to the shoulders of Captain Jones, who rose to the occasion with the lion-heartedness that has marked all his actions in life, resumed the control of his affairs and carried them up to the present illness."

A report from Gulfport says that Miss Grace Jones, who has been attending to her father's business affairs since his illness, is expected to continue in charge, and it is anticipated that she will be elected president of the Gulf & Ship Island Railroad, as she may be of other interests belonging to him at Gulfport, including, besides the traction company, the First National Bank, the hotel and other businesses.

NEW RAILROAD IN ARKANSAS.

Plans to Build from Rogers Southeast to Kingston and Bald Knob.

Plans, to build a railroad out of Rogers, Ark., to Bald Knob, about 165 miles, have crystallized in the organization of the Ozark & Arkansas Midland Railway Co., with \$750,000 of capital stock, of which \$201,000 is subscribed. It is proposed to build 40 miles of the projected line immediately from Rogers, Benton county, which is in the extreme northwestern part of the State, southeast to Kingston, in Madison county, adjoining. Later construction will be continued through Newton, Searcy, Van Buren, Cleburne and White counties in the same general direction to Bald Knob. The company has taken over eight miles of line formerly owned by the Ozark Land & Timber Co., this track running from Monte Ne to Piney, Ark. It will be extended in both directions to Rogers and Kingston, respectively. Connection with the St. Louis & San Francisco Railroad will be made at Rogers. The directors include G. G. Wright, C. M. Miller, L. B. Smith, R. F. Henderson and Towne Young, all of Dallas, Tex.; Senator John R. Duty, G. G. Wright, Jr., Dr. G. M. Love, Lee M. Harris and W. A. Mundell, all of Rogers, Ark., and C. P. Hummell of Monte Ne, Ark.

Car Shortage Causes and Remedies.

The Southern Pine Association, New Orleans, has filed a supplemental statement concerning the car shortage with the Interstate Commerce Commission, emphasizing the point "that the fault and responsibility for the existing car shortage lies primarily with the carriers, by reason of abnormally low per diem rates and their failure to observe the rules and agreements established by and between themselves, and secondarily with shippers and receivers of freight." It is also

stated that 65 subscribers to the Southern Pine Association have reported that of 9859 cars ordered from September 15 to September 30 this year, 4017 cars were received, or slightly less than 41 per cent. of their requirements. This assertion is supported by the further statement that in October, 1915, 153 mills reported shipments of 468,922,663 feet of lumber, while in October of this year they reported only 353,653,893 feet shipped. In the same month this year shipments were very nearly 15 per cent. less than production, while last year in October they were more than 15 per cent. in excess of production. Mills are refusing business because of inability to make shipments. Orders for 27,304 carloads of lumber were unfilled October 27.

In conclusion, the Southern Pine Association recommends that the car service and per diem rules recommended by the Carriers' Car Efficiency Committee, as approved by the Car Demurrage and Storage Committee of the National Industrial Traffic League, be rigidly enforced, and that the reconignment of lumber be uniformly prohibited except for certain reasons, such as business failure of purchaser, refusal to accept because of unreasonable delay in transit, etc., and in such cases at a charge of \$5 per car. The association refers to its former statement that increasing demurrage charges would not relieve car shortages unless accompanied by an enforcement of proper car service rule and increased per diem charges against railroads holding cars which should be returned, and it says that the developments of the hearing at Louisville proved the truth of the statement.

New Equipment, Etc.

Atlantic Coast Line has ordered 100 stock cars from the Standard Steel Car Co., Pittsburgh, and a dining car from the Pullman Company, Pullman, Ill. It may also purchase 200 hopper cars.

American Pine & Cypress Co., L. D. Cox, president, 603-18 Atlantic National Bank Building, Jacksonville, Fla., wants prices on locomotives and 25 to 40-pound rails for 3 miles of lumber railroad near St. Mary's, Ga.

Atchison, Topeka & Santa Fe Railway has ordered 28 Mikado type locomotives from the Baldwin Works, Philadelphia, besides 25 baggage cars and 10 second-class passenger cars from the Pullman Company.

Pennsylvania Railroad will build 1000 cars in its own shops at Altoona, Pa.

Nashville, Chattanooga & St. Louis Railway is reported in the market for 200 coal cars.

St. Louis & San Francisco Railroad is reported getting prices preliminary to placing contract for 30 locomotives.

Propose a Railroad Across Florida.

Chas. H. Baker of New York, representing the Southern Farms Co., has with a party just visited Tampa, Bradentown, Arcadia and Fort Myers, Fla., with the idea of considering a proposition to build a railroad across Florida to the eastern coast, possibly at Miami. Others composing the party were A. R. Gould, president of the Aroostook Valley Railroad, Presque Isle, Me.; Otto C. Butz, attorney-at-law, Chicago, and H. R. Hoffeld of Buffalo, N. Y. There is nothing definitely decided as to either the route or the financing of the proposition, and another trip of the parties interested is expected next month. A line was built last year from Bradentown to Arcadia by the East and West Coast Railway Co.

To Audit Freight Claims.

The American Freight Audit Co., capital stock \$25,000, has been incorporated at Louisville, Ky., to audit claims for freight overcharges against railroads and other common carriers. The incorporators are V. L. Dryer, M. B. O'Sullivan, W. G. Smith and T. R. Peak.

Southern Railway's Earnings Increasing.

The gross revenue of the Southern Railway during October, 1916, was \$7,248,070, increase as compared with the same month of last year \$1,110,806; operating expenses, taxes and uncollectible railway revenue \$4,

814,783, increase \$557,208; operating income \$2,433,287, increase \$553,598. The increase in gross was a little over 18 per cent. and in operating income slightly over 22 3/4 per cent.

For the first four months of the company's year, from July to October, inclusive, the gross revenue was \$25,754,160, increase as compared with the same period of last year \$3,188,022; operating expenses, taxes and uncollectible railway revenue \$18,178,546, increase \$2,027,739; operating income \$7,575,614, increase \$1,160,283. The increase in gross revenue was more than 14 per cent. and in operating income nearly 15 1/2 per cent.

Successful Meeting to Build Railroad.

[Special Dispatch to Manufacturers Record.]

Hugo, Okla., December 13.

Business was suspended yesterday and the people attended a mass-meeting to subscribe for the construction of the Hugo & Oklahoma Railroad, which will connect at or near Atoka with the Santa Fe system. Nearly all of 52 miles of right of way is secured. All classes of citizens subscribed to stock, there being \$50,000 and right of way requested of Hugo. One man of Choctaw blood offered his uncashed Indian check of \$600 and to auction his stock to raise his subscription to \$1000 to get the road. Work expected to start next month.

BEN. C. EASTIN,
Secretary Chamber of Commerce.

Large Street-Car Earnings.

The United Railways & Electric Co. of Baltimore reports to the Maryland Public Service Commission its earnings and expenses during the fiscal year ended June 30, 1916, as follows: Operating revenue, \$9,365,468; increase as compared with the previous year, \$347,346; operating expenses, \$4,172,332; decrease, \$67,770; net revenue, \$5,193,136; increase, \$415,116; operating income after deduction of taxes, \$4,240,604; increase, \$351,591; income balance transferred to credit of profit and loss, \$1,122,092; increase, \$349,380. As indicated above, taxes for the year amounted to \$952,531, but this large sum is owing to the contract made many years ago with the street railways that 9 per cent. of their gross earnings within the city limits should be paid to the city for park taxes.

Gulf, Mobile & Northern Railroad.

A report from Jackson says that the Mississippi State Railroad Commission has approved the consolidation of the three charters of the New Orleans, Mobile & Chicago Railroad, granted in Mississippi, Alabama and Tennessee, and also the organization of the company as the Gulf, Mobile & Northern Railroad Co. W. F. Owen of Mobile, who has been operating the road, will continue in charge of its affairs until the reorganization is completed. The plan to extend the line from Middleton to Jackson, Tenn., is to be carried out as soon as possible to give connection with the Nashville, Chattanooga & St. Louis Railway.

Seaboard Air Line Earnings Increasing.

The Seaboard Air Line Railway's statement of earnings for October, 1916, show gross \$2,392,797, increase as compared with the same month of last year \$318,702; net earnings after operating expenses and taxes \$683,054, increase \$128,064.

For the first five months of the current fiscal year, which began July 1, the gross earnings were \$7,992,949, increase as compared with the corresponding period of last year \$935,165; net earnings after operating expenses and taxes \$1,913,609, increase \$202,299.

The increase in operating expenses and taxes for October was \$190,638, and for the four months' period, \$732,866.

Improving an Important Tunnel.

The Pennsylvania Railroad Co. expects to complete the improvements to one of its two tracks through the long tunnel south of Union Station at Baltimore by

February, and the entire improvement to the tracks and tunnel is to be finished by October of next year. The tunnel is about 8000 feet long, and it is being enlarged to better accommodate the larger equipment which the railroads now employ. The tracks will be lowered 2½ feet, and the tunnel will also be widened. The bottom of the tunnel will be of concrete, and improved drainage will be installed. The work is prosecuted vigorously notwithstanding that the tunnel is very busy, as through it all solid trains to and from the South via Baltimore are handled, in addition to a heavy volume of other traffic.

\$3,000,000 Improvements for Dallas.

Improvements and extensions to cost ultimately \$3,000,000 are to be made to the light and street railway properties at Dallas, Tex., according to a report from there, which says that the work to be done by the proposed new street railway company, which will take over the present lines, will amount to about \$1,000,000 alone. C. W. Hobson will head the railway company, in which Julius A. Trawick is also interested. J. F. Strickland will head the light and power company.

Baltimore & Ohio Appointments.

Golden Shumate has been appointed division freight agent of the Baltimore & Ohio Railroad at Baltimore, succeeding W. R. Askew, who was promoted to be general freight agent, and Chas. H. Roberts, formerly chief clerk in the general freight agent's office at Pittsburgh, has been appointed division freight agent at Youngstown, O., to succeed Mr. Shumate. H. H. Marsh has been appointed division freight agent at Grafton, W. Va.

Railroad Notes.

E. C. Hathaway has resigned as assistant general manager of the Virginia Railway & Power Co. at Norfolk, Va., to give his entire time to the business of the Railway Audit & Inspection Co., Inc., Philadelphia, of which he is president. He will, it is stated, continue to be a director of the railway and power company. The company to which he will now devote his energies was organized by him about 12 years ago.

Fred. Dulancy and Joseph A. Caldwell have been appointed receivers of the Bristol Traction Co., Bristol, Va., by the Corporation Court there. It is alleged that semi-annual interest on the company's bonds, which was due September 1, 1916, was not paid. Action was also taken in the Chancery Court of Bristol, Tenn., adjoining.

The Central of Georgia Railway has adopted the use of oil-burning locomotives on four of its suburban trains to and from Savannah.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

To Manufacture Knit Goods.

The Ellerbe (N. C.) Knitting Mills, lately incorporated with \$25,000 capital, has organized to build mill and install machinery for manufacturing knit goods. Prices on the necessary machinery and on building materials are invited. This new company's officers are: W. L. Howell, president; B. B. Farlow, vice-president; J. R. Bennett, secretary-treasurer.

To Spin Fine Combed Yarn.

Fine combed yarn will be spun by the Cherokee Spinning Co., Knoxville, Tenn., mentioned in November as incorporated with \$125,000 capital. A 5000-spindle equipment is proposed, and J. E. Serrine, Greenville, S. C., is the architect-engineer in charge. The new company has organized with M. B. Melendy, presi-

dent and general manager; E. J. McMillan, vice-president; J. T. Brownlee, secretary, and J. E. Briscoe, treasurer.

Textile Notes.

The Monroe (Ga.) Cotton Mills will install 300 automatic looms, and this new machinery has been ordered from the Draper Company of Hopedale, Mass.

Charles L. Amos, J. W. Harris and Wescott Roberson, High Point, N. C., have incorporated the Amos Hosiery Mills Co. with a capital of \$35,000.

The St. Francis Cotton Mills of Helena, Ark., will add 5000 spindles, with accompanying machinery, and contract for this new equipment has been awarded.

The Bristol (Tenn.) Hosiery Mills has ordered and will add 200 knitters to its present equipment of 60 machines. It is operating both day and night in order to meet the demands for its product.

The Saluda Manufacturing Co., Greenville, S. C., lately chartered with \$15,000 capital, has organized with the following officers: F. H. Cunningham, president; E. C. Gwaltney, vice-president; J. G. Cunningham, secretary-treasurer.

Summerfield Baldwin, Jr., Baltimore, Md., will establish a cotton mill at Phoenix. He has ordered the machinery, and will utilize the buildings and 136 acres of land recently purchased from the Mt. Vernon-Woodberry Cotton Duck Co.

The Yount Cotton Mills, Newton, N. C., will build an 8168-spindle cotton mill at Conover, N. C. George W. Setzer of Newton is the architect-engineer, and the building will be of brick, 200x80 feet, two stories high. All the machinery has been purchased except a frame driven electric system with 300-horse-power generator, and this equipment is wanted. The company also wants 800,000 bricks, delivery to begin March 1.

Costa Rica Wants American Products.

CRUXENT & OLMO, P. O. Box 40, San Jose de Costa Rica, C. A.

We are interested in securing agencies of producers and manufacturers, particularly for products comprised within the branch of textiles and novelties in every form. This firm has all along given attention to representing makers and producers of Europe, and particularly those of Spain, but the present favorable occasion arising, as a result of well-known causes, we have decided upon amplifying our business, and consequently are now looking toward the market called upon to predominate.

Census of Cotton-Goods Manufactures.

A preliminary statement of the 1914 census of manufactures for the cotton-goods industry of the country has been issued by the United States Bureau of the Census. Comparisons are made with the figures from the census of 1909. During the five years the total capital invested, including cotton goods, cotton small wares and cotton lace, increased from \$822,237,529 to \$899,764,682. The number of wage-earners (average) increased from 378,880 to 379,396, a growth in number of 3.8 per cent., and wages increased 14.7 per cent. The number of salaried employes increased from 8514 to 8951, a growth of 17.7 per cent., and salaries represented an increased total of 20.7 per cent. There was practically no change in number of establishments, but proprietors and firm members increased 29.7 per cent. The figures follow:

CENSUS OF COTTON GOODS MANUFACTURE, COMPARATIVE SUMMARY FOR THE UNITED STATES, 1909 AND 1914.

	1914.				1909.	Per cent. of increase, 1909-1914.
	Total.	Cotton goods.	Cotton small wares.	Cotton lace.	Total.	
Number of establishments.....	1,328	1,179	108	41	1,324	0.3
Persons engaged in manufacture.....	403,911	388,726	7,062	8,123	387,771	4.2
Proprietors and firm members.....	489	469	70	10	377	29.7
Salaried employes.....	10,018	8,951	294	673	8,514	17.7
Wage-earners (average number).....	393,404	378,880	6,538	9,066	378,880	3.8
Primary horse-power.....	1,535,933	1,569,757	10,100	7,440	1,236,517	22.3
Capital.....	\$899,764,682	\$867,043,678	\$11,764,495	\$20,956,509	\$822,237,529	9.4
Services.....	\$169,822,599	\$161,679,759	\$3,463,783	\$4,679,057	\$147,270,933	15.3
Salaries.....	\$17,400,000	\$15,550,131	\$638,893	\$1,210,976	\$14,411,758	20.7
Wages.....	\$152,422,599	\$146,129,628	\$2,824,890	\$3,468,081	\$132,559,145	14.7
Materials.....	\$443,522,515	\$431,602,540	\$6,243,027	\$5,676,948	\$371,009,470	19.5
Value of products.....	\$701,300,933	\$676,569,115	\$11,525,033	\$13,206,785	\$628,391,813	11.6
Value added by manufacture (value of products, less cost of materials).....	\$257,778,418	\$244,966,575	\$5,282,006	\$7,529,837	\$257,382,343	0.2

Good Roads and Streets

SOUTHERN HIGHWAY ACTIVITIES.

Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.

Bonds Voted.

Fairmont, W. Va.—City voted \$40,000 bonds for street improvements, etc.

Hohenwald, Tenn.—Lewis county voted \$100,000 bonds for road construction.

La Grange, Ky.—Oldham county will issue \$50,000 bonds for construction of roads and bridges during 1917.

Lynn, Fla.—City issued \$10,000 bonds for completion of road and dock improvement.

Bonds to Be Voted.

Cameron, W. Va.—City will vote on \$60,000 bonds for street paving, etc.

San Marcos, Tex.—Hayes county votes January 6 on \$75,000 bonds for road construction.

Tablequah, Okla.—Cherokee county votes December 22 on \$100,000 bonds for road improvements, etc.

Contracts Awarded.

Arcadia, Fla.—City awarded contract for 158,000 square yards asphalt concrete and 140,000 feet curb and gutter.

Dallas, Tex.—City awarded \$19,785 paving contract.

Dallas, Tex.—City awarded \$81,578.66 paving contracts.

De Land, Fla.—Volusia county awarded \$100,000 contract for road construction.

Eutaw, Ala.—Greene county awarded \$8019.49 contract for road construction.

Fort Myers, Fla.—Lee county awarded \$111,800 contract to clear and grade road.

Ormond, Fla.—City awarded contract for 22,000 square yards hard surface and improvements to dock; cost \$35,000.

Oxford, Miss.—Lafayette county awarded contract for 14 miles of sand and clay road.

Portsmouth, Va.—Norfolk county awarded \$8000 contract to construct three-quarters mile of boulevard.

Salisbury, N. C.—City awarded \$30,000 paving contract.

Sapulpa, Okla.—City awarded \$3373.14 paving contract.

Stuttgart, Ark.—City awarded contract for four miles of curb and gutter.

Wheeling, W. Va.—Ohio county awarded \$40,000 paving contract.

Contracts to Be Awarded.

Bradentown, Fla.—Manatee county will construct 20 miles of hard-surfaced roads, etc.

Earlington, Ky.—City will expend \$15,000 on macadamizing about three miles of streets and constructing concrete gutters.

Greenwood, S. C.—City will expend \$7500 on street paving.

Hallettsville, Tex.—Lavaca county receives bids until December 20 to construct 10 miles of graveled road in District No. 1.

Lakeland, Fla.—City receives bids until January 19

for 13,800 square yards (12 miles) of paving with sheet asphalt, asphalt block or brick.

Moulton, Ala.—Lawrence county will construct five miles of macadam road.

Ocean City, Md.—Isle of Wight Land Co. will construct seven miles of concrete road.

Pineville, W. Va.—Wyoming county receives bids until December 23 to construct 76 miles of earth roads.

St. Petersburg, Fla.—City will open bids December 22 on 8000 square yards of brick paving.

St. Petersburg, Fla.—City will pave eight blocks of streets.

Bitulithic Paving Contract at \$19,785.

Another contract for street paving has been awarded at Dallas, Tex., bitulithic to be the material. This contract has been awarded at \$19,785 to the Texas Bitulithic Co. of Dallas.

For 76 Miles of Highway.

The Wyoming County Court, Pineville, W. Va., has plans for constructing 76 miles of highway. This work is divided into six sections of varying mileage, and bids are to be received until December 23.

How Improvement of Main Highways Benefits Those in Back Country.

When roads in any State or county are to be improved, some of those whose farms are not located directly on the proposed main highways have opposed the improvement, because they think it will not be of much benefit to them. A striking illustration of the fallacy of such belief is shown in the photograph of one of California's concrete roads. Here are seen farmers who live off the main road bringing their products to the improved highway in two, four or six-horse teams and transferring the loads to motor trucks and trailers to be carried to market. This view is on one of California's concrete highways known as the Bakersfield road, near Grapevine Creek.

In many places in the South the States and counties may have funds sufficient to build main highways that provide quick transportation by the most direct route between important centers of trade. This is considered the logical and proper way in which to lay out a comprehensive highway system, on the ground that well-planned highways of this kind serve the best interests of all. Those not located on the main highways can secure the benefit of the improvement by following the method of the California people until such time as the feeders to the main highways can be improved. Because the influence of good roads is felt in every part of the county or State in which they are built, the appeal is made to every citizen having the interest of his community at heart for support of movements for bond issues for modern roads, whether they pass his door or not, for when built the benefit to him of such improvements, both in helping him to get his products quickly to market and in increasing the value of his property, become readily apparent.

MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

Rotary Power Oil Pumps.

In view of the enormous demand for machine tools at the present time, the new line of rotary oil pumps for individual lubrication on lathes, grinders and other machines, placed on the market by The Goulds Manufacturing Co., Seneca Falls, N. Y., is of particular interest.

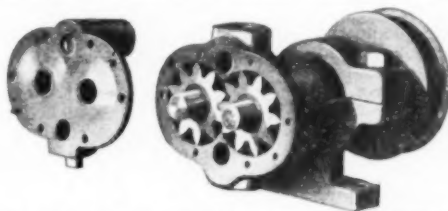
Goulds rotary oil pumps are especially designed in two styles for pumping compounds and oils to metal-working machines. One style runs in either direction



ROTARY OIL PUMP FOR RIGHT OR LEFT OPERATION.

and is adapted to screw machines and automatic machines that reverse. The other type runs in one direction and is suitable for gear-cutting machines, chucking machines, and in general any machine tool that operates in one direction.

The utmost attention is said to be given to the workmanship and materials on Goulds rotary oil pumps.



PUMP WITH TYPE "A" FOOT. COVER REMOVED TO SHOW CAMS AND BY-PASS ARRANGEMENT.

and their reputation for high efficiency and durability is largely due to this care in manufacture. The pumps produce an even flow, and the power demand on the driver is steady. The foot of the pump is made in two styles and can be swivelled about to 360 degrees, an adjustable feature that makes it possible to locate these pumps on almost any style of machine tool.

Both styles of pumps are equipped with a relief valve and by-pass built into the cover, enabling the operator to control the amount of oil or cutting com-

pound, and also protects the pump against any excess pressures that might be built up owing to the closing of the oil pipe or valve.

Attention is called to the fact that the relief valve and by-pass are part of the pump, and not accessories. Particular attention is given to the making of the gears and cams, which are generated on a gear shaper and are of such a design as to give practically perfect rolling contact.

These and other types of power-driven rotary pumps for fire protection, pumping chemicals, milk and other liquids are described and illustrated in Bulletin No. 113, recently issued by the company.

"Ribplex" Reinforcing Plate.

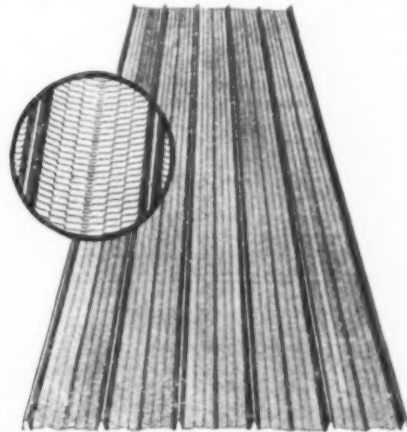
The Berger Manufacturing Co., Canton, O., has brought out a new ribbed reinforcing plate which is aptly named "Ribplex."

The design is a plexus or network of strands forming meshes between V-shaped stiffening or supporting ribs. These ribs have an inverted arch-shaped formation at their base, from which the turned-on-edge mesh strands start.

This combination is said to greatly increase the strength and rigidity of the plate, adding very materially to its utility and quality.

The company states that the process of manufacture has been brought to a degree of perfection that insures a perfectly uniform product.

Ribplex is a combined centering and reinforcement,



SECTION OF "RIBPLEX" REINFORCING.

especially used for reinforcing floors, roofs, sidewalls, partitions, stucco construction, suspended ceilings and practically all kinds of construction where concrete or plaster is used.

The small meshes formed between the ribs prevent the soft concrete from running through and make a splendid bond with the concrete, so that it is possible to develop the full tensile value of the metal. This is claimed to be a most desirable feature.

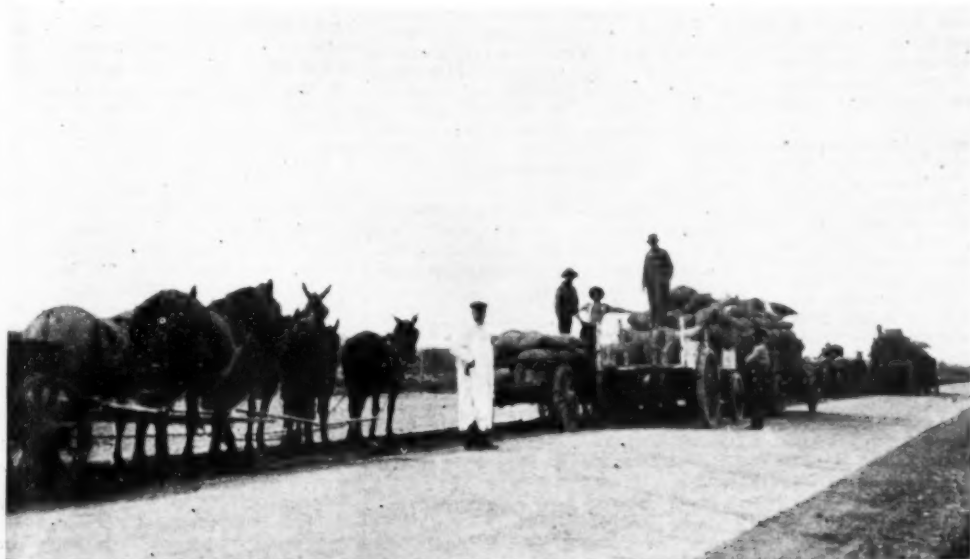
The Berger Manufacturing Co. will be pleased to forward, on application, detailed information on Ribplex and send samples and prices to prospective purchasers.

Three New Alabama Graphite Enterprises.

Graphite properties in Clay county, Alabama, will be developed by three corporations, which have been chartered with a total capitalization of \$300,000. These are: May Bros. Graphite Co. of Ashland, Ala., chartered with \$255,000 capital by J. Warren May, George F. Montz, E. D. Noe and others; Eagle Graphite Co., also of Ashland, chartered with \$100,000 by A. A. Northen, J. B. White and C. S. Northen; Peerless Flake Graphite Co., Lineville, Ala., chartered with \$35,000 capital by L. G. Brantley, S. C. Doby and S. L. Brewer.

\$100,000 Abattoir Packing Company.

A modern abattoir and meat-packing plant for cattle, sheep and hogs will be built at Savannah by a \$100,000 company which has been incorporated by S. Friedman and associates. The Savannah Abattoir & Packing Co. is the title of the new enterprise, and among those interested is A. Mandel, H. Horowitz, E. M. O'Brien and W. Rabhan.



BACK COUNTRY TEAMS BRINGING PRODUCTS TO MAIN HIGHWAY FOR QUICK SHIPMENT TO MARKET.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the post-office will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ala., Rockford.—Coosa County will construct two 40-ft. clear span reinforced concrete bridges on turnpike south of Rockford across Rockford and Hatchmadegged creeks; also 20-ft. clear span reinforced concrete bridge on Nixburg and Equality Rd. near Equality; County Comms. receive bids until Dec. 11; Lofton Thomas, Judge of Probate. (See Machinery Wanted—Bridge Construction.)

Ala., Seale.—Russell County Comms. let contract C. W. Cooper of Anniston at \$345 to construct bridge across Brush Creek on Tuskegee and Columbus Rd.; concrete construction. (Lately noted inviting bids.)

Ala., Tascumbia.—Colbert County Comms. let contract Jas. McClure of Florence, Ala., to construct bridge over Bear Creek; steel; concrete foundations and abutments.

Ark., Mt. Ida.—Montgomery County will construct 4 bridges—one across Ouachita River, 2 spans 110 ft. long; another over Ouachita River, 1 steel span 200 ft. long; 140-ft. steel span bridge across North Fork, 3 mi. from Buckville; and bridge across Caddo River, 140-ft. steel span; cost about \$25,000; bids Dec. 29; J. R. Kelly, County Judge, Oden, Ark. (See Machinery Wanted Bridge Construction.)

Fla., Bradentown.—Manatee County will construct 4 concrete, steel and wood bridges, 54, 90, 108 and 230 ft. long, respectively, latter to be provided with steel swing draw allowing clear opening of 30 ft.; also construct culverts to require 140 cu. yds. concrete; bids until Jan. 8; Robt. H. Roesch, Clk. County Comms. (See Road and Street Work and Machinery Wanted—Road and Bridge Construction.)

Fla., Chattahoochee.—Gadsden County voted bonds to construct bridge across Apalachicola River on Old Spanish Trail at Chattahoochee; bridge to be built in conjunction with Jackson County; Government appropriated \$42,000 and will let construction contract. Address Gadsden County Comms., Quincy, Fla.

Fla., De Land.—Volusia County Comms., De Land and Lake County Comms., Tavares, granted franchise Michael Sholtz to construct bridge across St. Johns River at Crow's Bluff; length, 500 ft.; width, 18 ft.

Ga., Atlanta.—City let contract R. M. Walker of Atlanta, Ga., at \$19,400 to repair Edgewood Ave. bridge; construction by city, Southern Ry. and Georgia Ry. & Power Co. (Mr. Walker lately noted as lowest bidder.)

Ky., La Grange.—Oldham County, S. E. De Haven, County Judge, will issue \$50,000 bonds for road and bridge construction during 1917.

Ky., Richmond.—Madison County voted \$35,000 bonds toward construction of Clay's Ferry bridge across Kentucky River to be built in conjunction with Fayette County and perhaps with private capital, subscribing to traction franchise; approximate cost \$200,000; all details of engineering, financing and construction yet to be consummated; J. G. Baxter, County Judge. (Noted in Nov.)

Ky., Williamsburg.—Whitley County, B. F. Rose, County Judge, will construct 2 bridges; one to span 300 ft.; the other, 100 ft.; let contract in Jan. (See Machinery Wanted—Bridge Construction.)

La., Des Allemands.—Blodgett Construction Co. of Shreveport, La., is lowest bidder at \$21,612.50 to construct steel swing bridge across Bayou des Allemands, near Des Allemands; W. E. Atkinson, State Highway Engr., New Orleans. (Noted in Nov. as inviting bids.)

Miss., Bay St. Louis.—Mississippi Bridge & Turnpike Co. organized to construct highway bridge across Bay St. Louis connecting city of Bay St. Louis and Pass Christian; Howard Eggleston, Engr., Hibernia Bank Bldg., New Orleans, prepared plans for structure 2 mi. long, of reinforced concrete and steel construction; draw entirely of steel, having 100-ft. clear space to accommodate passing vessels; width, 35 ft., with foot path and space for electric railroad and vehicles; estimated cost \$600,000 to \$800,000. Mr. Eggleston wires Manufacturers Record: Hope to begin construction within 90 days.

Mo., Kansas City.—Park Comms., T. C. Harrington, Secy., let contract to Horton Concrete Construction Co., Kansas City, to build bridge over Blue River at 71st St., Swope Park; reinforced concrete structure, consisting of 5 open-spandrel arch spans resting on columns founded on soapstone, 2 hollow-box abutments resting on soil, and

earth fill at east end; concrete structure to be about 700 ft. long and earth fill 280 ft.; roadway 40 ft. wide in clear, 2 walkways 8 ft. wide in clear; roadway on bridge to be paved with creosoted wood block on reinforced concrete slab, and that on earth filled with macadam; walkways on concrete structure to consist of reinforced concrete slabs with ¾-in.-thick wearing surface; cast-iron lamp posts along curb line; conduits for lead-covered slabs along curb line; bridge designed by and construction under supervision of Waddell & Son, Kansas City. (Bids lately noted.)

Okla., Tahlequah.—Cherokee County voted Dec. 22 on \$100,000 bonds to construct bridges at several points on Illinois River and to improve roads leading to sites of proposed bridges. Address County Comms.

Va., Mendota.—Washington County, Kinderhook Dist., L. D. Crawford, Supvr., let contract Roanoke Iron & Bridge Works, Roanoke, to construct bridge across North Fork of Holston River at Mendota; foundation completed; plans by State Highway Com., Richmond.

W. Va., Fairmont.—City voted \$760,000 bonds, to be expended as follows: \$350,000 to construct bridge over Monongahela River, \$50,000 of which will probably be contributed by Monongahela Valley Traction Co.; \$100,000 to construct bridge or fill connecting Adams or Main St. with Fairmont Ave., to replace present structure over Coal Run; \$40,000 to open and improve streets and build culvert over Bell Run on Carleton St. at intersection with 7th St.; \$7500 to pave with wooden blocks or other material present bridge across Monongahela River (connecting east side and west side city) and bridge over Buffalo Creek along Pennsylvania Ave.; \$30,000 to extend and improve sewer system; \$5000 to build garbage incinerator; \$7500 to build fire station on east side; \$145,000 to pay floating indebtedness and refund outstanding bonds; total amount bond issue is exclusive of \$50,000 to be contributed by traction company toward construction of Monongahela River bridge; Anthony Bowen, Mayor. (Lately noted to vote.)

CANNING AND PACKING PLANTS

Ala., Prichard.—A. D. Davis Packing Co., S. A. Darnell, Engr., 105 S. Royal St., Mobile, advises Manufacturers Record: Plans for packing plant in hands of architects, Henschien & McLaren, Chicago; no contract let for erection or machinery; propose to erect brick and concrete building 167x72 ft., 2 stories and basement, with separate engine and boiler house 70x35 ft., also brick and concrete; approximate cost of buildings without equipment \$30,000; ask for building and equipment bids about Jan. 15. Supercedes recent item.)

Fla., Tampa.—Tampa Citrus Growers' Assn. will rebuild packing plant lately burned; erect building 70x90 ft.; daily capacity 2 carloads.

Ga., Savannah.—Savannah Abattoir & Packing Co., capital \$100,000, incptd. by S. Friedman, A. Mandel, H. Horowitz, E. M. O'Brien and W. Rabhan; purchased 12-acre site; build abattoir and meat-packing plant for cattle, sheep and hogs.

N. C., Wilmington.—Carolina Packing Co., W. W. Love, Prest., will acquire Sans Souci abattoir and adjoining 6 acres; Brooks Engineering Co. of Mountrie, Ga., to prepare plans and supervise erection of additional buildings estimated to cost \$30,000; expects to let building contracts in Jan.; daily capacity 130 to 160 hogs and 15 bees. (Noted in Sept. as organized with \$100,000 capital, etc.)

N. C., Wilson.—Wilson Commission & Warehouse Co. contemplates establishing plant to can fruits and vegetables in Nos. 1, 2 and 3 tins. (See Machinery Wanted—Canning Machinery.)

CLAYWORKING PLANTS

Ga., Summerville.—Brick and Tile.—P. C. Horan and C. H. Brock contemplate erecting brick and tile factory.

S. C., Orangeburg.—Bricks.—Edisto Brick Co. (C. G. McLees and Henry Von Ohlsen, Jr.) will build brick plant; ordered machinery.

COAL MINES AND COKE OVENS

Ala., Gadsden.—W. T. McCord will develop coal mines.

Ala., Nauvoo.—Peerless Coal & Mining Co. organized; Chas. B. Teasley, Prest. and Mgr.; Wm. T. Selbies, V.-P.; C. W. Shackelford, Secy.-Treas.; develop 1000 acres; present capacity 100 tons, to be increased to 500 or 600 tons; J. D. Roper, Constr. Engr. (Lately noted incptd., capital \$20,000.)

Ala., Thomas.—Republic Iron & Steel Co., general offices, Youngstown, O., has not determined upon building coke ovens; C. T. Fairbairn, Mgr. of Southern Dist., Birmingham, advises Manufacturers Record: We have not as yet appropriated any money for building by-product coke-oven plant and no definite plans have as yet been formulated. (Previously noted.)

Ala., Tuscaloosa.—De Bardeleben Coal Co., Birmingham, purchased 3000 acres Brookwood seam coal land on Warrior River; will develop for monthly shipment by river to Mobile and New Orleans of 25,000 tons coal; install coal washers and other equipment.

Ala., Walker County.—Alabama Power Co., Birmingham, is reported as preparing to develop coal lands near auxiliary steam plant now being constructed near Baker's Creek on Warrior River, Walker County; to supply coal required at steam plant.

Ky., Perry County.—Swift Coal & Timber Co., Whitesburg, Ky., purchased coal and timber lands on Big Leatherwood Creek.

Ky., Whitesburg.—J. H. Hall and others will develop coal land tracts of J. C. Day and R. B. Day.

Okla., Catale.—Catale Coal Co., capital \$20,000, incptd. by R. E. Overton, K. K. Stough and E. N. Conger.

Tenn., Alton Park.—Chattanooga Gas & Coal Products Co., James Bldg., Chattanooga, and 61 Broadway, New York, will build additional coke ovens; Lewis F. Wolfe, Prest., writes to Manufacturers Record: Arrangements made whereby 24 by-product coke ovens will be added to have capacity for 300 tons coke per day; no contract yet executed for new construction, and we are not prepared to announce type of ovens that will be selected; expect new ovens in operation about Sept. 1, 1917. Unauthoritative report states cost will be \$500,000.

Tenn., Caryville.—Gold Bond Coal Co., Knoxville, Tenn., J. G. Sterchl, Prest., lately noted incptd., capital \$10,000, is prospecting; has 350 acres coal and 400 acres iron ore.

W. Va., Amherstdale.—Prokter-Eagle Coal Co., capital \$100,000, incptd. by H. C. Duncan, Jr., W. K. Cowden, G. H. Dimick, Jr., and others.

W. Va., Bluefield.—Crockett Red Ash Coal Co., capital \$24,000, incptd. by W. C. Pollock, Frank M. Pollock, W. T. Russell and others.

W. Va., Charleston.—Miami Coal Co., capital \$10,000, incptd. by G. W. Hancock, J. T. Lightner, S. Smith, and others.

W. Va., Charleston.—West Virginia Coal Mining & Development Co. chartered by Alexander Armstrong, 9 Jonathan St., Hagerstown, Md., and others.

W. Va., Fairmont.—Old Dominion Coal Co., capital \$120,000, incptd. by John A. Clark, Jr., Chas. C. Robb, Edgar B. Rowe and others.

W. Va., Jullian.—Diamond Block Coal Co., capital \$25,000, incptd. by H. B. Summers of Jullian, W. C. Delaney and Owen McCormick of St. Albans, W. Va., and others.

W. Va., Mount Hope.—Sunset Mining Co. organized; V. S. Veazey, Prest.; J. M. McVey, Secy.; develop 17¼ acres land; daily output, 150 tons coal; install electric, steam or gasoline hoist, mine cars, etc. (See Machinery Wanted—Mining-plant Equipment.)

W. Va., Stonewall.—Batoff Coal Co., capital \$5000, incptd. by H. H. Blackburn of Fire Creek; Ernest Echols, E. C. Echols and J. H. Dempsey of Dimmock, W. Va., and R. L. Carter of Fayetteville, W. Va.

W. Va., Williamson.—Wolf Fork Coal Co., capital \$50,000, incptd. by Harry Scherr, Wells Hoodykoots, B. W. Sheppard and others; operate in West Virginia and Kentucky.

CONCRETE AND CEMENT PLANTS

Miss., Meridian.—Trestles, Culvert and Sewer Pipe, etc.—C. F. Massey Co. of Chicago (with plants at Newark, Minneapolis, Spokane, Des Moines, Chicago, Memphis and Anna, Ill.) purchased 6-acre site; will erect plant costing \$25,000 to \$40,000 for manufacture of reinforced concrete railway

treesties, bridge decks, culvert and sewer pipe, concrete piling, battery wells, etc.

Va., Roanoke—Cement Tile.—Roanoke Cement Tile Corp. organized to manufacture concrete tile for roofing; now operating temporary plant; contemplates establishing plant near Roanoke River on Jefferson St.

COTTON COMPRESSES AND GINS

Ala., Lineville.—Pleasant Grove Gin Co., capital \$20,000, incptd. by G. W. Griffin, W. E. Brown, H. B. Ferrell and others.

Ark., Texarkana.—G. W. Bishop will rebuild cotton gin noted burned in Nov.; building plans not decided; address K. R. Bishop, Texarkana, Ark., R. No. 4.

Okla., Checotah.—Hutchinson Gin Co., capital \$10,000, incptd. by R. B. Hutchinson, R. P. Rutherford and D. M. Hutchinson.

N. C., Goldsboro.—New Hope Gin & Milling Co., capital \$10,000, incptd. by Ben Casey, Jr., A. L. Casey and H. H. Casey.

Tex., Benjamin.—Benjamin Gin Co., capital \$7500, incptd. by E. C. Young, W. F. Snoddy and W. A. Earnest.

Tex., Colorado.—Watson Gin Co., capital \$10,000, incptd. by W. E. Watson, F. W. Britton and G. C. Winchester.

COTTONSEED OIL MILLS

Tex., Snyder.—Farmers' Union Gin Co. will build cottonseed oil mill.

DRAINAGE SYSTEMS

Ark., Marion.—Comms. Crittenden County Drainage Dist. No. 3 will construct drainage canals requiring 2,000,000 cu. yds. excavation; bids until Dec. 18; Ferree & McCleskey, Engrs., Memphis, Tenn. (See Machinery Wanted—Excavation.)

Ark., Newport.—Jackson County, Maple Slough Drainage Dist., will construct drainage system; 413,873 cu. yds. dredge ditch excavation, 64,859 cu. yds. scraper ditch excavation, 2000 lin. ft. 24-in. drain tile, 300 lin. ft. concrete drain tile and 20 wooden trusses and stringer bridges; bids at office of Hillhouse & Boyce until Dec. 20; W. R. Harvey, Chrmn. Drainage Dist.; W. A. Bowman, Engr., Newport. (See Machinery Wanted—Dredging, etc.)

La., Gonzales.—New River Drainage Dist., Leon Picard, Prest. Drainage Board, voted \$40,000 additional bonds to continue construction of drainage system. (Noted in Nov. to vote.)

ELECTRIC PLANTS

Ky., Glasgow.—Kentucky Utilities Co., H. Reid, Prest., Lexington, Ky., plans to erect central power plant.

Okla., Bartlesville.—Caney Valley Electric Light Co., capital \$5000, incptd. by W. H. Bryan, W. I. Crites and Paul Byron.

Okla., Collinsville.—City Commrs. contemplate enlarging electric-light plant.

Okla., Laverne.—Laverne Light, Power & Ice Co., capital \$30,000, incptd. by W. H. K. Lewis, E. R. Lewis and Marcia Lewis.

Okla., Mounds.—City contemplates constructing electric-light plant. Address The Mayor.

Okla., Muskogee.—Vian Service Co., capital \$30,000, incptd. by A. S. Nelson and L. C. Schlaphohl of Muskogee and G. W. Fry of Claremore, Okla.

Okla., Muskogee.—People's Service Co., capital \$5000, incptd. by A. S. Nelson and L. C. Schlaphohl of Muskogee, and G. W. Fry of Claremore, Okla.

Tenn., Rugby.—Memphis & Rugby R. R., Memphis, will install power plant at Rugby Park.

Tex., Gustine.—W. T. Ball, Comanche, Tex., and others will expend \$2500 to install lately-noted electric plant; develop 30 H. P. (See Machinery Wanted—Electric-light Equipment.)

Tex., Pearsall.—Pearsall Electric Light Co. acquired established property and will rebuild electric-lighting system.

Tex., Winters.—Winters Light & Milling Co. changed name to Winters Light & Power Co. and is reported as contemplating improvements to plant.

Va., Dillwyn.—Dillwyn Light & Power Co., capital \$5000, incptd. by B. H. Barnes, Prest.; A. W. Carter, Secy-Treas.

Va., Richmond.—Virginia Ry. & Power Co. will construct 13,500-volt transmission line to connect with American Locomotive Works to supply power.

W. Va., Clarksburg.—Monongahela Valley Traction Co., Fairmont, W. Va., and Clarksburg Light & Heat Co. will erect transform-

er station at Clarksburg to enable companies to supply power to one another in case of emergency.

FERTILIZER FACTORIES

Ala., Montgomery.—J. M. Lang Co., capital \$50,000, incptd. by Jos. M. Lang, Robt. L. Mercer, Jas. E. Henderson, Jr., and G. Mercer Lang; succeeds J. M. Lang & Co., 118 Bay St., E.

FLOUR, FEED AND MEAL MILLS

Ga., Augusta.—H. C. Middleton, 412 Leonard Bldg., may install machinery to grind and mix stock feed. (See Machinery Wanted—Feed Mills.)

Ga., Dublin.—D. S. Brandon and A. D. Blackshear organized company to establish feed mill.

Ga., Marshallville.—Marshallville Milling Co. will erect 40x60-ft. 2-story building of ordinary wood construction; cost \$1750; purchased alfalfa mill machinery, cost \$2000; daily capacity 15 tons mixed feed into standard meal. (Lately noted organized to establish feed mill.)

N. C., Goldsboro.—New Hope Gin & Milling Co., capital \$10,000, incptd. by Ben Casey, Jr., A. L. Casey and H. H. Casey.

Tenn., Friendship.—Robertson & Cherry, E. A. Robertson, Mgr., will erect lately-noted mill; 24x50-ft. ordinary-construction building; open building proposals Jan. 1; install machinery (recently noted purchased), cost \$3000; capacity 25 bbls. grain per 24 hours.

FOUNDRY AND MACHINE PLANTS

Ala., Birmingham.—Frogs and Switches.—Kilby Frog & Switch Co. increased capital from \$150,000 to \$200,000. (Lately noted to vote on increase and to have let \$30,000 contract for 30x300-ft. addition, for which equipment has been purchased, including planers, shapers, etc.)

Ark., Ruddells.—Wrenches.—Arkansas Lime Co. plans to manufacture patented wrench; will let contract for lots of 10,000. (See Machinery Wanted—Wrench Manufacturing.)

D. C., Washington.—Machine Shops.—Capital Construction Co. will remodel 2-story brick shop at 2104 14th St. N. W.; cost \$4000; W. S. Spencer, Contr., 1724 Willard St. N. W., Washington.

Mo., St. Louis.—Electrical Appliances.—Electric Material Co., capital \$5000, incptd. by C. R. Baldwin and others.

Mo., St. Louis.—Electric Machinery.—Waggon Electric Mfg. Co., 1109 Federal Reserve Bank Bldg., Broadway and Pine St., contemplates increasing capital from \$2,000,000 to \$5,000,000. (Lately noted to build additional plant to about double capacity.)

Okla., Tulsa.—Structural Steel.—Oklahoma Structural Steel Co., capital \$10,000, incptd. by J. W. Sloan, P. M. Iverson and E. A. Shaw.

Okla., Tulsa.—Oil Tanks.—Drane-Owen Tank Co., capital \$25,000, incptd. by F. M. Drane and C. A. Mechling of Tulsa, and W. H. Owen of Kiefer, Okla.

Tex., Houston.—Superheated-air Device.—Tidewater Sulphur & Mfg. Co. (DeWitt C. Dunn and others) will install machine shop to manufacture superheated-air device to be used in mining sulphur, cultivation of orchards, oil-well cleaning, etc. (See Mining.)

GAS AND OIL ENTERPRISES

La., Shreveport.—Oil Refinery, Pipe Lines, etc.—Caddo Oil & Refining Co., capitalization \$10,000,000, incptd. by J. D. Atkins and E. H. Smith of Shreveport, R. E. Robinson & Co. of New York and E. W. Clark & Co. of Philadelphia; has \$750,000 fund for immediate new developments; these plans provide for drilling 250 additional wells; 44,120 acres gas and oil land, 58 ml. of pipe line, refinery with daily capacity 2000 bbls. oil, refinery with daily capacity 5000 bbls. oil, etc.; property acquired includes Caddo oil refinery, Shreveport oil refinery, Red River Pipe Line Co., Star Oil Co., State Oil & Gas Co., Oil Fields Gas Co., Biobe Oil Co., etc.

Mo., Kansas City.—Oil Refinery.—Thwing-Evans Co. organized by Fred. H. Thwing, Harry W. Evans and others; will build \$1,000,000 plant for refining and otherwise handling oil; facilities to include refinery, storage tanks, tank cars, etc.

Mo., St. Louis.—McDole Oil Co., capital \$25,000, incptd. by Geo. McDole and others.

Okla., Adair.—Tincup Oil & Gas Co., capital \$15,000, incptd. by W. Miller of Watts, Okla.; J. H. Roberson and E. R. Cooper of Denver, Col.

Okla., Allen.—Boxley Bend Oil Co., capital \$50,000, incptd. by E. T. Gilmore, J. A. Kurtz and others.

Okla., Alex.—Gold Standard Oil Co., capital \$50,000, incptd. by R. Cruce, J. M. Hanna and F. I. Murdock.

Okla., Afton.—Commercial Gas Co. organized by J. J. Hubbard, J. R. and W. Dawson; applied for gas franchise.

Okla., Apache.—Mulholland Oil & Gas Co., capital \$20,000, incptd. by W. J. Mulholland, Newton Cowan and R. W. Frick.

Okla., Ardmore.—Pipe Line.—Ardmore-Oil Fields Transportation Co., capital \$400,000, incptd. by Wirt Franklin, B. A. Simpson and Edward Gakt.

Okla., Ardmore.—New Hieldton Oil Co., capital \$150,000, incptd. by Harold Wallace and J. S. Mullen of Ardmore, and Jake L. Hamon of Chicago.

Okla., Bristow.—Edlowa Oil & Gas Co., capital \$50,000, incptd. by Sam K. Wasaff of Bristow, Henry Lowenstein and Conrad P. Ekfelt of St. Louis, Mo.

Okla., Cheyenne.—Los Lomis Oil & Gas Co., capital \$31,000, incptd. by L. W. Pate, T. L. Miller and T. L. Turner.

Okla., Claremore.—Liberal Oil & Gas Co., capital \$125,000, incptd. by A. M. White, Claremore; G. W. Sawyer and J. C. Mahoney of Liberal, Kans.

Okla., Cushing.—Oil Pipe Line.—Roxana Petroleum Co., Tulsa, Okla., engaged Sanderson & Porter of New York as engineers in charge of construction oil pipe line from Cushing oil fields to site of proposed oil refinery in St. Louis. (Reported in September to build pipe line from Tulsa to St. Louis, with daily capacity of 2500 bbls. and to build oil refinery in St. Louis.)

Okla., Hominy.—Oil Refinery.—Osage Refining Co., capital \$50,000, incptd. by L. H. Rogers, R. E. Nell and C. D. Webster, all of Yale, Okla.

Okla., Norman.—Big Jim Oil Co., capital \$150,000, incptd. by C. H. Bessem, C. W. Hughes and Fred Reed.

Okla., Fairview.—Fairview Oil & Gas Co., capital \$120,000, incptd. by Garnett O. Fields and J. E. Morse of Fairview and John A. Cooney of Tulsa.

Okla., Jet.—Jet Oil & Gas Co., capital \$20,000, incptd. by F. F. Linden, C. H. Morlock and G. M. Nelson.

Okla., Muskogee.—Phil-Mid Oil Co., capital \$10,000, incptd. by A. W. Lefebvre, J. W. Zevely and O. E. Swan.

Okla., Oklahoma City.—Oil Refinery.—White Star Refining Co., capital \$250,000, incptd. by LeRoy Paddock, John B. Enfield and Geo. M. Campbell.

Okla., Oklahoma City.—Pablo Distributing Co., capital \$10,000, incptd. by A. J. Green, Oklahoma City; A. M. Gouch and N. E. Tuell of Hartsborne, Okla.

Okla., Oklahoma City.—T-P & C-W Oil & Gas Co., capital \$4000, incptd. by M. H. Teller, L. O. Pulett and G. E. Chaffee.

Okla., Oneta.—Oil Refinery.—Oneta Refining Co., capital \$50,000, incptd. by F. D. Misener, Chas. F. Bisset and J. B. Gregory.

Okla., Poteau.—Poteau Anticline Oil & Gas Co., capital \$50,000, incptd. by Tom Wall, J. L. Spengler and Sam McClure.

Okla., Sallisaw.—Sallisaw Producing Co., capital \$100,000, incptd. by W. L. Curtis of Sallisaw, A. S. Nelson of Muskogee, Okla., and G. W. Fry of Claremore, Okla.

Okla., Sapulpa.—Fisher Oil Co., capital \$5000, incptd. by W. A. Wise and L. B. Jackson of Sapulpa and J. H. Fisher of Kellyville, Okla.

Okla., Tulsa.—Bona Producing Co., capital \$50,000, incptd. by E. F. Gester, H. F. Rambo and L. G. Livesay.

Okla., Tulsa.—Gasoline.—Sooner Oil & Gasoline Co., capital \$25,000, incptd. by J. E. Hildt, J. S. Pearce and N. L. Drake.

Okla., Tulsa.—Oil Refinery.—Constantine Refining Co. will erect \$2500 building at oil refinery.

Okla., Tulsa.—Redux Oil Co., capital \$50,000, incptd. by Thos. D. Lyon, H. F. Rambo and L. G. Livesay.

Okla., Tulsa.—Gasoline.—Misener Gasoline Co., capital \$40,000, incptd. by F. D. Misener, Chas. F. Bisset and J. B. Gregory.

Okla., Tulsa.—La Belle Oil & Gas Co., capital \$10,000, incptd. by J. J. McKanna, Oklahoma City; D. W. Conger, Mounds, Okla.; Warren H. Brown, Sapulpa, Okla.

Okla., Tulsa.—Gasoline.—Kermont Gasoline Co., capital \$50,000, incptd. by F. A. Peck, W. D. Abbott and G. R. Edmond.

Okla., Tulsa.—Cuban Oil & Gas Co., capital \$25,000, incptd. by W. C. Wolfe of Tulsa, R. M. Kincaid, Mulhull, Okla.; R. J. Conaway, Guthrie, Okla.

Okla., Tuttle.—Tuttle Oil & Gas Co., capital \$30,000, incptd. by Geo. M. Meil, H. E. Green and Floyd Kimble.

Okla., Woodward.—Home Producers Oil & Gas Co., capital \$100,000, incptd. by J. C. Verwer, C. O. McCue and O. W. Cox.

Tex., Austin.—Gas Plant.—Austin Gas Light Co. increased capital from \$50,000 to \$550,000.

Tex., Fort Worth.—Oil Refinery.—Pierce Oil Corp., 420 Olive St., St. Louis, Mo., will enlarge Fort Worth oil refinery, increasing daily capacity from 8000 to probably 20,000 bbls. crude oil; will also enlarge Texas City plant; this work is in connection with construction of 8-in. oil pipe line from Hendland (Okla.) field to Fort Worth, 100 ml., estimated to cost \$1,250,000. (Pipe line, etc., lately noted.)

Tex., Fort Worth.—Springtown Oil & Gas Co., capital \$50,000, incptd. by Grover Smith and Thos. Prenall of Fort Worth, and S. T. Speer of Springtown.

Tex., Houston.—Texas Standard Oil Co., capital \$150,000, incptd. by J. O. Ehlinger, R. C. Russell and Larue Nelson.

Tex., Houston.—Houston's Texas Petroleum Co. increased capital from \$60,000 to \$100,000.

Tex., Houston.—Hoyt-Davis Oil Co., capital \$200,000, incptd. by G. H. Davis, L. C. Abell, W. W. Parker and J. M. Brown.

Tex., Houston.—Horseshoe Oil Co., capital \$150,000, incptd. by John D. Larkins and Jas. L. Storey of Houston, E. E. Peacock of Dallas and others.

Tex., Joshua.—Johnson County Oil Co., capital \$50,000, incptd. by L. H. Hunter, L. O. Bonham, R. S. Stark and others.

Tex., Port Neches.—Oil Refinery.—John Henning, V. P. Union Sulphur Co., Sulphur, La., and Harvey W. Gilbert, Beaumont, Tex., purchased 2900 acres of land 3 mi. south of Port Neches; will build oil refinery.

Tex., Santa Anna.—Hay Creek Oil Co., capital \$20,000, incptd. by Jason Tyson, John Campbell, S. J. Pieralt and others.

Tex., Texas City.—Oil Refinery.—Pierce Oil Corp., 420 Olive St., St. Louis, plans to expend \$300,000 to enlarge oil refinery at Texas City; \$20,000 will be expended in doubling capacity of plant and \$100,000 for general improvements; plans to erect additional buildings and has ordered machinery.

Tex., Seely.—Bernard Oil & Gas Co., capital \$50,000, incptd. by A. C. Schaffner, R. A. Engelking and John Hackbath.

Tex., Wichita Falls.—Carboniferous Oil Co., capital \$50,000, incptd. by Cyrus Edwards, Geo. E. Shockey and A. T. McKean.

Tex., Wichita Falls.—South Side Oil Co., capital \$12,000, incptd. by L. P. Hammond, G. C. Wood and W. F. Weeks.

Tex., Wichita Falls.—Collins Oil Co., capital \$162,000, incptd. by J. A. Kemp, Frank Kell, W. E. Norton, Chas. W. Bean and others.

W. Va., Roane County.—Roane County Oil & Gas Co., capital \$3,500,000, incptd. by L. R. Martin, F. J. Holup, L. T. Sanders, E. C. McHugh and R. T. Russell, all of Pittsburgh, Pa.

ICE AND COLD-STORAGE PLANTS

Ark., Paragould.—Hurt-Heaton Wholesale Grocery Co., F. J. Heaton, Prest., will install cold-storage and refrigerating plant.

Fla., Vero.—Edward Miranda of Bunnell, Fla., is reported as considering establishment of ice plant.

S. C., Cheraw.—L. C. Wannamaker and Wm. Godfrey are reported as interested in establishment of 20-ton ice factory.

Tex., Dallas.—Southern Ice & Utilities Co. increased capital from \$650,000 to \$850,000.

IRON AND STEEL PLANTS

Ala., Gadsden.—Iron Furnace.—Alabama Co., Birmingham, may blow in another furnace; H. W. Coffin, V. P., writes to Manufacturers Record: Have no plan for blowing in second Gadsden furnace; at early date expect to have conference with chairman of directors.

LAND DEVELOPMENTS

Ala., Birmingham.—Glenwood Land & Improvement Co., capital \$10,000, incptd. by C. C. Baxter, Prest.; Thos. N. Walter, V. P. and Secy.; M. M. Ullman, Secy.

Ala., Robertstown.—Iron Furnace.—Tennessee Coal, Iron & Railroad Co., Birmingham, Ala., will blow in furnace No. 4 at Robertstown by Dec. 15, after completion of relining, overhauling and remodeling.

Ark., Hope.—Riverland Ranch, capital \$160,000, incptd. by M. J. Munn, Prest.; J. M. Allen, V. P.; J. J. Allen, Secy-Treas.

Ark., Speirtown.—Everton Mining & Development Co., Albert C. Speirs, Mgr., will build town at mines near Everton; under

construction are 15 houses, stone store building, postoffice and stone residence. (See Mining, Ark., Everton.)

Ga., Townsend.—Georgia Land & Livestock Co. organized; J. R. Paschall, Pres., Richmond, Va.; E. M. Thorpe of Townsend, Ga.; C. C. Reed of Richmond, Va., and M. P. Burwell, Warrenton, N. C., all V.-Ps.; owns 128,000 acres 4a McIntosh and Liberty counties; will fence entire tract; expects to graze 20,000 head of cattle and 10,000 head of sheep; now establishing 2000-acre farm to grow ensilage for cattle feed and build 100 silos for storing ensilage; property has 20 mi. deep-water front, 5,000,000 ft. standing timber, 4,500,000 cross-ties and 500 crops of turpentine, and is traversed by 2 railroads.

Md., Hancock.—Corona Orchard Co., capital \$50,000, inceptd. by Chas. J. Caspar (Pres.), Pittsburgh, Pa.; Edmund P. Cobill and John P. Caspar of Hancock, and others; purchased fruit land near Hancock.

Okla., Kendall.—City votes Dec. 21 on \$15,000 bonds to acquire and improve site for park; C. W. Johnson, Pres. of Board; Geo. H. Coe, Town Clerk.

Tex., Austin.—Texas Pecan Co., capital \$40,000, inceptd. by Wm. H. Gerhard, Worth S. Ray and M. H. Burt.

Va., Irving.—Virginia Plantation Co., capital \$10,000, inceptd.; J. H. Gill, Pres.; A. Leamy, V.-P.; both of Columbus, Ohio; Walter J. Quick, Secy.-Treas., Roanoke, Va.

LUMBER MANUFACTURING

Ala., Montgomery.—Cramton Lumber Co., F. J. Cramton, Prop., and T. L. Bear, Mgr., will erect (by company force) planing mill buildings lately noted; 150x160 ft.; cost \$15,000; mill construction; install generator and individual electric motors; planing mill products, sash, doors and cabinet work.

Ark., Little Rock.—Arkmo Lumber Co., capital \$50,000, inceptd. by Gordon H. Campbell (Pres.), S. L. Ehrman, Grover T. Owens and T. L. Bond.

Fla., Jacksonville.—American Pine & Cypress Co., lately noted to establish sawmill, will operate in Georgia. (See Ga., St. Marys.)

Fla., Jacksonville.—Gress Mfg. Co., M. V. Gress, Pres., 18 Broadway, New York, lately noted to reconstruct planing mill burned at reported loss of \$100,000, advises Manufacturers Record: Will rebuild at once; expect to have specifications ready for machinery about Dec. 15. (See Machinery Wanted—Sawmill Equipment.)

Ga., Savannah.—Interstate Land & Lumber Co., capital \$25,000, inceptd. by E. T. Glaeser, P. O. Mead and W. J. Green.

Ga., St. Marys.—American Pine & Cypress Co., 603 Atlantic National Bank Bldg., Jacksonville, Fla., capital \$100,000, inceptd.; Leonard D. Cox, Pres. and Mgr.; V. G. Black and J. E. Guilkey, V.-Ps.; R. E. Castetter, Secy.-Treas.; erect sawmill and planing mill with steam dry kiln; ordinary mill construction with cement floors and metal roofs; install equipment, including 8-ft. band mill and power plant; open machinery bids Jan. 2; manufacture pine and cypress lumber, shingles, etc.; daily capacity 25,000 ft. lumber and 50,000 shingles. (See Machinery Wanted—Sawmill Equipment, etc.)

Ky., Mayking.—W. W. Gibson & Son reported to develop hardwood timber lands on Boones Fork.

Ky., Seco.—South East Coal Co. will install sawmill for cutting timber boundary; also build 40 miners' houses.

La., Leesville.—Peavy-Wilson Lumber Co., capital \$1,000,000, organized; A. J. Peavy, Pres.; R. J. Wilson, V.-P.; Secy.-Treas.; all of Peavy-Byrnes Co., Shreveport; will cut timber from 50,000 acres in Vernon, Sabine and Natchitoches parishes; build mill near Leesville with daily capacity 150,000 ft. and construct railroad from Longleaf, Rapides Parish, to junction with Kansas City Southern Ry. near Christian.

Va., Berryville.—Hyde County Land & Lumber Co., capital \$300,000, inceptd.; H. C. Warden, Pres., Berryville; W. A. Baker, Secy., Winchester, Va.

Va., Oak Chapel.—Dublin Mfg. Co., Pulaski, Va., purchased and will develop timber land; build sawmill; has equipment.

METAL-WORKING PLANTS

Mo., Kansas City.—Cartridges.—Brass & Metal Mfg. Co., A. U. Dann, Pres., and C. B. Burton, Supt., will open bids Jan. 1 to erect lately-noted buildings; ordinary construction; 36x150 and 30x130 ft.; this enlarges present plant, making floor space 35,000 ft.; has purchased cartridge machinery.

Tex., Galveston—Cans and Cases.—Pierce Oil Corp., 420 Olive St., St. Louis, Mo., contemplates erecting can and case factory to cost \$100,000.

MINING

Ala., Ashland—Graphite.—Eagle Graphite Co., capital \$100,000, inceptd. by A. A. Northen, J. B. White and C. S. Northen.

Ala., Ashland—Graphite.—May Bros. Graphite Co., capital \$225,000, inceptd. by J. Warren May, John J. May, Geo. F. Montz and others; plans to mine and refine graphite.

Ala., Ashland—Graphite.—Acme Graphite Co., 1820 American Trust Bldg., Birmingham, Ala., will develop 320 acres; daily capacity 300 tons; A. J. Eisenmayer, Springfield, Mo., Pres.; A. W. Shulthis, Independence, Kans., V.-P. and Treas.; L. H. Weller, Secy., Asst. Treas. and Mgr.; W. C. Martin, Construction Engr., both of Birmingham.

Ala., Birmingham—Iron.—Phoenix Iron Co., capital \$10,000, inceptd.; Ira C. Dalrymple, Pres.; W. S. Allen, V.-P.; John Armistead, Secy.-Treas.

Ala., Birmingham—Graphite.—United Graphite Co. inceptd. by W. L. Shumate, Jr., Roy J. Emerson and J. F. Berry Baugh.

Ala., Boyles—Limestone.—Gulf States Steel Co., Birmingham, will develop Spencer quarry near Boyles.

Ala., Jemison.—Dixie Developing & Mining Co., lately noted (under Ala., Clanton) as increasing capital to \$50,000; will develop 1600 acres; no machinery needed at present; Robt. E. Gill, Pres.; W. M. Glass, V.-P.; W. R. Darrington, Treas.; T. M. Hilton, Mgr.

Ala., Lineville—Graphite.—Peerless Flake Graphite Co., capital \$35,000, inceptd. by L. G. Brantley, S. C. Doby, S. L. Brewer, J. M. Barfield and others.

Ark., Buffalo.—Parnell Mining Co., capital \$35,000, inceptd.; S. T. Parnell, Pres.; offices with O'Marra Mine Co.

Ark., Everton—Zinc, etc.—Everton Mining & Development Co., 71 W. 23d St., New York (lately noted developing property and to install additional 100-ton ore mill), has 600 acres; cost of zinc and carbonate mills, \$20,000 each; open mining machinery bids Dec. 15; Jos. Migliore, Pres.; A. Ferber, V.-P.; Albert C. Speirs, Secy. and Mgr.; Albert S. Speirs, Treas.; J. Hamilton Mobley, Const. Engr., Everton; new developments reported to cost \$150,000 and include erection of 15 houses at new town (Speirtown), also stone store building, postoffice and a stone residence, these all under construction; 100-ton ore mill is completed; electric lights being installed. (See Machinery Wanted—Mining Machinery.)

Ark., Van Buren—Zinc.—Arkansas Zinc & Smelting Corp., E. G. Horthorn, Pres., will build reducing plant to extract gold and silver from zinc ore; estimated cost, \$10,000.

Ga., Macon—Stone.—A. T. Small Quarries, capital \$75,000, inceptd. by A. T. Small and C. M. Preston of Preston-Small Construction Co.

Mo., St. Louis.—Spring Grove Stock, Fruit & Mining Co., capital \$10,000, inceptd. by Lee H. Mallalieu and others.

N. C., Penland—Kaolin, etc.—Penland Clay Co. (lately noted organized with Harry Bailey interested) will mine kaolin, feldspar and mica; 8000 to 10,000 tons annually; install clay-washing machinery, dynamos, tubular boilers, engines, hoisting outfits, dump cars, etc. (See Machinery Wanted—Mining-plant Equipment.)

Okla., Cardin—Lead and Zinc.—B. M. Sims, V. S. Simpson, J. C. Reed and others of Commerce, Okla., organized company to develop 80-acre mining tract; contemplate building mill.

Okla., Cardin—Lead and Zinc.—Rex Mining Co. leased 105 acres at Cardin for development; plans to build mill.

Okla., Miami.—Trustee Mining & Milling Co., capital \$2000, inceptd. by D. A. McCallum of Miami, W. M. Sheridan and J. C. Long of Chicago.

Okla., Miami.—Yellow Daisy Mining Co., capital \$50,000, inceptd. by B. H. Wilson of Miami, M. O. Greenstreet and A. G. Hoppe of Lebanon, Mo.

Okla., Oklahoma City.—Centennial Mineral Corp., capital \$5000, chartered by S. A. Ritchie, J. H. Ritchie and Frank Ritchie.

Okla., Picher—Lead and Zinc.—Chas. Swartz will build 400-ton concentrating plant.

Tex., Houston—Sulphur.—Tidewater Sulphur & Mfg. Co. organized by DeWitt C. Dunn, E. W. Townes, J. C. Tolman and others; acquired sulphur deposit near Houston and will develop; also install machine shops to manufacture patented superheated-air de-

vice to be used in mining sulphur. (See Foundry and Machine Shops.)

W. Va., Wheeling.—Elm Grove Mining Co., capital \$150,000, inceptd. by Jas. A. Paisley and Wm. W. Woods of Cleveland, Ohio; Thos. Stillcorn of Rodfield, Pa., and others.

MISCELLANEOUS CONSTRUCTION

Fla., Lynn—Dock Improvements.—City, P. C. Dixon, Mayor, issued \$10,000 bonds to complete dock and road improvements.

Fla., Miami—Swimming Pool and Windmill.—Carl G. Fisher of Miami and Indianapolis, Ind., will build additional swimming pool and Dutch windmill on Miami Beach casino grounds; windmill is to furnish water for both pools; tower to be 22 ft. in diam. and 40 ft. high; each of sails will be 9x30 ft., having spread of 60 ft.; cost \$15,000.

Ga., Macon—Underpasses.—Georgia Southern & Florida Ry., W. F. Kaderly, Gen. Supt., Macon, let contract H. B. Hoppendeitz Construction Co. at \$15,000 to construct 3 underpasses and 1 culvert; reinforced concrete.

Ga., Macon—Docks.—Macon-Atlantic Navigation Co., A. J. Long, Pres. (lately noted to extend dock facilities), has let contract for tracks into river, terminals for 24 cars, platforms and stages; cost about \$5000; machinery contract also let; Robt. Tarleton, Engr.

Ky., Lexington—Swimming Pool.—Parent-Teachers' Assn., Mrs. Richard Wilkinson, Pres., plans to construct community swimming pool; graduated depth; about 30x60 ft. in area; self-flushing type; under roof; shower baths, etc.; heated in winter.

Ky., Lexington—Subway.—City Engineering Dept., J. White Guyn, City Engr., and Southern Ry., W. H. Wells, Chief Engr. Construction, Washington, D. C., are preparing tentative plans for subway to eliminate grade crossing on Versailles Pike at end of West High St.; cost \$50,000 to \$60,000.

La., New Orleans—Dock.—Dock Board and Southern Pacific Ry. (A. V. Kellogg, Engr. M. W., Houston, Tex.) will rebuild Dumaine St. Wharf, wrecked in storm of Sept., 1915; wharf and shed to be 1402 ft. long; part of wharf to be of reinforced concrete and remainder of creosoted materials; estimated cost \$300,000.

N. C., North Wilkesboro—Dam.—City let contract to Rand & Robbins, Winston-Salem, N. C. (address after Jan. 1, North Wilkesboro), for concrete dam, yardage about 2000, and concrete culvert and core wall; cost about \$20,000; cement purchased; asking bids on pumps; J. N. Ambler, Engr., Winston-Salem; Rand & Robbins lately noted as lowest bidders. (See Machinery Wanted—Pumps.)

Tex., San Marcos—Hardware.—Hons-McNulty Hardware Co., capital \$10,000, inceptd. by J. M. Hons, M. P. McNulty and G. A. McNaughton.

MISCELLANEOUS ENTERPRISES

La., New Orleans—Stockyards and Abattoir.—Union Stock Yards Co. let contract Lionel Favrot of New Orleans to construct stockyards and abattoir; estimated cost \$100,000; plans by Paul Andry, New Orleans. (Noted in Oct. to build stockyards covering 4 blocks.)

Md., Curtis Bay—Grain Elevator.—Curtis Bay Distilling Co. (United States Industrial Alcohol Co., New York) will, it is rumored, build \$1,000,000 grain elevator of fireproof concrete construction.

Mo., St. Louis—Skating Rink.—Delmar Skating Co., capital \$10,000, inceptd. by J. C. Jannopoule, Theo. J. Haig and Wm. Barron.

N. C., Manteo—Fishery.—Burnside Fish & Farm Product Co., capital \$20,000, inceptd. by S. A. Griffin of Manteo, A. W. Midgett of Elizabeth City, N. C., and A. L. Griffin of Norfolk, Va.

S. C., Columbia—Greenhouses.—Columbia Floral Co., 2418 Main St., A. F. Becker, Pres.-Mgr., will erect greenhouses; cost undecided. (Lately noted inceptd.)

Tenn., Chattanooga—Incinerator.—City will construct garbage incinerator; E. D. Bass, Commr. Dept. of Streets and Sewers, receives bids until Jan. 2. (See Machinery Wanted—Incinerator.)

Tex., Wichita Falls—Incinerator.—City, W. E. Monks, Mayor, let contract to Sparks Crematory Co., Memphis, Tenn., to install incinerator; cost \$4000.

Tex., Wichita Falls—Laundry.—Company, Harvey Harris, Pres., and M. P. Kelley, Mgr., will erect steam laundry.

W. Va., Beckley—Publishing.—Co-Operative Publishing Co. capital \$5000, inceptd. by

Clark Wiley, G. F. Parsons, H. W. Hall and others.

W. Va., Fairmont—Incinerator.—City voted \$5000 bonds to build garbage incinerator. Anthony Bowen, Mayor. Lately noted to vote. (See Bridges, Culverts, Viaducts.)

MISCELLANEOUS FACTORIES

Ala., Opelika—Overalls.—Opelika Overall Co. increased capital from \$5000 to \$15,000.

Ala., Gadsden—Candy.—Folda & Pulsifer of Montgomery will build candy factory.

Ala., Mobile—Naval Stores.—Harry T. Inge and associates organized company with \$100,000 capital to establish naval stores plant; B. C. Pickens, Mgr.; offices in City Bank Bldg.

Ark., Van Buren—Glass Bottles.—Howard Glass Co. of Henrietta, Tex., is reported as contemplating establishment of glass bottle factory.

D. C., Washington—Bakery.—John G. Meisberg, 716 11th St. S. E., will erect addition to bakery at 717 12th St. S. E.; cost \$19,500.

Fla., Miami—Sugar.—South Florida Sugar Co., capital \$50,000, inceptd.; J. L. Clerk, Pres., New York; J. A. Moore, V.-P., and Philip Clarkson, Secy.-Treas., both of Miami.

Ga., Albany—Ice-cream.—Geo. Grace and S. A. Price will establish ice-cream factory; have building; purchased \$5000 worth of machinery.

Ga., Augusta—Syrup.—H. C. Middleton, 412 Leonard Bldg., may install equipment to refine syrup. (See Machinery Wanted—Syrup Machinery.)

Ga., Savannah—Ice Cream.—Forest City Ice Cream Co., capital \$10,000, inceptd. by A. A. Chapin, B. J. Ford and Bernard Thyson.

Ga., Savannah—Stone.—Reconstructed Stone Co., capital \$10,000, inceptd. by Clifford G. Rowland and Wm. M. Clark to manufacture hydraulic reconstructed stone.

Ky., Carrollton—Bottling.—Coca-Cola Bottling Works, capital \$5000, inceptd. by E. W. Wilcock of Carrollton, F. S. Schmidt of Louisville and Jo Wilcock of Campbellsville, Ky.

La., Kaplan.—Louisiana State Rice Milling Co., New Orleans, will build rice mill at Kaplan; purchased machinery.

Md., Baltimore—Rubber Heels and Soles.—Monumental Heel Co., 2401 W. Baltimore St., organized; Thos. W. Burgee, Pres.; Jos. S. Kaufman, V.-P.; Isaac Michel, Secy.-Treas.; Jos. T. Mahon, Gen. Mgr.; daily output, 1000 prs. heels, etc.; having product manufactured by contract.

Md., Baltimore—Hydro-aeroplanes.—Commercial Ship & Hydro-aeroplane Co. of America, capital \$300,000, will be inceptd. by J. Wm. Barcus, 1717 W. Fayette St., and J. Frank Fox, 211 Law Bldg.; establish plant to manufacture hydro-aeroplanes.

Md., Baltimore—Macaroni.—Savarese Macaroni Co., 9th St. and B. & O. R. R., will build 2-story, 88x40 and 50x30-ft. additions; let contract to E. Eyring & Sons, 800 S. 3d St.; Geo. R. Callis, Jr., Archt., Knickerbocker Bldg.; both of Baltimore.

Md., Curtis Bay—Alcohol.—Curtis Bay Distilling Co. (United States Industrial Alcohol Co., New York) will, it is rumored, build additions equipped with machinery to manufacture by-products from molasses waste of alcohol production; also rumored to build \$1,000,000 grain elevator of fireproof concrete construction.

Md., Havre de Grace—Barges.—Delbert Bros., Elkton, Md., are reported as planning establishment of plant to build barges.

Md., Lonaconing—Glass.—Lonaconing Glass Co. will rebuild plant recently noted burned at loss of \$70,000.

Mo., Carthage—Fuses.—Beard-Qualls Co. contemplates manufacture of fuse for ignition of explosives. (See Machinery Wanted—Fuse Materials and Machinery.)

Mo., St. Louis—Clothing.—S. Gelber Garment Co., capital \$10,000, inceptd. by Samuel Gelper, Jacob H. Herman and others.

Mo., St. Louis—Electric Switch Boxes.—Magnet Mfg. Co., capital \$10,000, inceptd. by I. Korsch, A. L. Jacobs and M. D. Frumberg.

Mo., St. Louis—Fire Protector.—Flexo Tire Protector Co., capital \$50,000, inceptd. by Oscar Hentschel, Raleigh McCormick and others.

N. C., Belhaven—Mattresses.—Harry Swindell is interested in proposed establishment of factory for corn-shuck mattresses with cotton tops. (See Machinery Wanted—Mattress Machinery.)

N. C., Gastonia—Bakery.—Todd Steam Bakery will occupy new building described

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to Nov.; owner is J. B. Beal; plans have been prepared; contract not yet let. (In recent item Mr. Beal, owner, was incorrectly reported as contractor.)

N. C., Salisbury—Window Shades.—L. N. Patterson Coates, N. C., will establish window shade factory; has machinery; plans to install additional equipment.

Okla., Comanche—Weldons Mfg. Co., capital \$10,000, incptd. by J. B. Wood, J. H. Weldon and F. O. Weldon.

Okla., Muskogee—Oil Heaters.—Solar Oil Heating Co., 622 Equity Bldg., lately noted incptd., capital \$10,000, will manufacture heating device for cookstoves and heaters; asking prices on manufacture of the device and on other equipment; John M. Coe, Pres.; Chester R. Teter, V.-P. (See Machinery Wanted—Cast-Iron Heating Device Manufacture.)

Okla., Oklahoma City—Ojelsa Mfg. Co., capital \$100,000, incptd. by O. D. Halsell, Jas. Deckman and H. H. Halsell.

Okla., Oklahoma City.—Enterprise Mfg. Co., capital \$50,000, incptd. by W. E. Bruce, T. J. Bruce and G. P. Leverich.

Okla., Ponca City—Lubricants.—Ponca Lubricant Co., capital \$100,000, incptd. by Wm. J. Ryan, S. E. Hall and W. B. Hampton.

Okla., Tulsa—Tools.—Oklahoma Tool & Supply Co., capital \$10,000, incptd. by J. W. Sloan, P. M. Iverson and E. A. Shaw.

Okla., Watts—Limestone Products.—Limestone Products Co., capital \$10,000, incptd. by Frank Trowbridge of Watts, T. A. Trowbridge and C. R. Evans of Siloam Springs, Ark.

S. C., Greenville—Salve.—Elacs Co. incptd.; J. P. Benson, Pres.-Mgr.; W. H. Moore, V.-P.; L. B. Poole, Secy.; manufacture salve.

S. C., Greenville—Clothing.—National Garment Mill, capital \$10,000, incptd. by B. P. Woodside and C. G. Woodside.

S. C., Greenville—Food Products.—The Williams Co., capital \$250,000, organized with J. Hudson Williams, Pres.; A. L. Mills, V.-P.; T. C. Gower, Treas.; continue and enlarge established plant manufacturing jam nuts, flakes, etc.

Tenn., Bristol—Cleanser Products.—Reynolds Corp. will rebuild cleanser products plant reported burned at estimated loss of \$150,000.

Tenn., Chattanooga—Tools.—Handy Tool Mfg. Co., capital \$10,000, incptd. by Sam P. Foster, A. J. Rogers, A. J. Corley and others.

Tenn., Chattanooga—Folding Boxes.—O. B. Andrews Co. opened bids Dec. 4 to erect mill-construction buildings of irregular sizes; 2 floors and basement, 16,000 ft. each; Chas. Bearden, Archt., Chattanooga; install folding box machinery, cost about \$25,000; daily capacity 10,000 folding boxes, products including wood containers, corrugated folding and stiff; date of opening machinery bids not set; S. H. Robertson, Mgr.

Tenn., Chattanooga—Hair Preparation.—United Cosmetic Co., capital \$75,000, incptd. by H. Kletman, E. H. Hunter, J. B. Vigle and others.

Tenn., Kingsport—Dyes, etc.—Federal Dye Stuff & Chemical Co., Geo. T. Bishop, Pres., 11 Pine St., New York, will add new machinery, increasing daily capacity from 50,000 to 100,000 lbs. of dyes, chemicals, etc.; writes to Manufacturers Record: Increase of 100 per cent. will require, mainly, installation of additional machinery and equipment in existing departments or units, etc.; experts are making preliminary estimates; soon present final statements and recommendations.

Tenn., Union City—Children's Clothing.—Child's Specialty House will occupy building to be erected by Jas. M. Brice, owner; let building contract to W. Spradlin, Hickman, Ky.; building (or buildings) 3 stories; 150x50 ft.; cost \$20,000; Child's Specialty House now operating 35 sewing machines; install 100 additional machines; manufacture children's clothing. Buildings owned by Jas. M. Brice lately noted burned; also, Child's Specialty House previously noted to occupy portion of building to be erected. (See Machinery Wanted—Elevator (Electric, Passenger).)

Tex., El Paso—Cigars.—Bon Sante Cigar Co., capital \$25,000, incptd. by Mrs. Nellie Lightbourne, Jas. W. Gibb and Mrs. Florida Lightbourne.

Tex., Galveston—Chemicals.—Interstate Chemical Co. increased capital from \$15,000 to \$50,000.

Tex., McKinney—Ice Cream, Bottling, etc. McKinney Bottling Works, A. Craus, Prop., will erect ordinary-construction, 2-story, brick, 60x28-ft. addition to building; construction by the company; manufacture ice

cream, coca cola and soda water. (Lately noted.)

Tex., San Antonio—Windmills.—Atlas Windmill Co., capital \$150,000, incptd. by F. R. Williams and G. W. Hazewood of San Antonio and O. L. Hoffman of Weatherford.

Va., Newport News—Shipbuilding.—Newport News Shipbuilding & Drydock Co. proposes extensive improvements during 1917; H. L. Ferguson, Pres., wires Manufacturers Record: Expect to spend about \$850,000 next year in plant improvements. These betterments are to include enlargement of shops, construction of ship shed on north side of yard, extension of machine shop between present shop and boiler and forging works, extension of foundry for steel castings, building addition to office, installing considerable new machinery, etc.; contemplates building additional ship ways.

Va., Richmond—Tobacco.—P. Lorillard Co. (New York office, 119 W. 40th St.) is completing plans for annex to plant at 23d and Main Sts.; 3 stories; brick; mill construction; cost \$60,000 to \$75,000.

Va., Roanoke—Creamery.—Dutch Dairy & Creamery Co., capital \$100,000, incptd.; C. Ryder, Pres.; John G. Challice, V.-P.; L. L. Ryder, Secy.-Treas.

Va., Roanoke—Apple Products.—Virginia Fruit Product Co., Louis A. Schols, Pres. and Gen. Mgr., lately noted incptd., capital \$125,000, and to remodel plant of Virginia Brewing Co., advises Manufacturers Record: Ready for bids on machinery for handling apples and products; also other fruits, and for making denatured alcohol. (See Machinery—Cider and Apple Butter Machinery, etc.)

W. Va., Charleston—Beverages.—West Virginia Beverage Co., capital \$300,000, incptd. by Howard Hundley and F. B. Morgan of Charleston; H. L. D. Mohnman, C. M. Miller and Julien Gunn of Richmond, Va.

W. Va., Moundsville—Glass.—Fostoria Glass Co. will construct 4-story 60x60-ft. reinforced concrete additional building costing \$25,000; has let contract.

MOTOR CARS, GARAGES, TIRES, ETC.

Ark., Russellville—Garage.—Ragsdale Garage will occupy building to be erected by L. T. Ragsdale; brick construction.

Ark., Little Rock—Automobiles.—Reliable Auto Co., capital \$10,000, incptd. by John Mitchell, G. E. Mealey, Henry Scott and others.

D. C., Washington—Garage.—Dan Loughran will erect 2-story brick garage; cost \$3000; plans by H. F. Boryer, 1300 F St. N. W., Washington.

Fla., St. Petersburg—Garage.—J. M. Stithens contemplates building garage.

Ga., Atlanta—Automobiles.—W. E. Wimpy purchased 150x50-ft. site for \$11,400; will build 4-story structure for automobile salesroom.

La., New Orleans—Garage.—John K. Edwards will erect garage; 2 stories; fireproof.

La., New Orleans—Garage.—H. M. Field will erect garage and apartment-house.

Md., Cumberland—Automobile Tires.—Kelly-Springfield Tire Co., Akron, Ohio, decided to build extensive plant for manufacturing automobile tires; wires Manufacturers Record: Decision not reached on details. Let contract to S. Diescher & Sons, Consol. Engrs., Farmers Bank Bldg., Pittsburgh, who writes to Manufacturers Record: Contract covers preparation of plans and specifications and supervision of plant construction; it will be several months before definite details can be stated. (Previous unconfirmed reports state plant to cost \$2,000,000 or more.)

Miss., Meridian—Motor Transportation.—Houston Service Co. incptd. by J. J. Houston, E. P. Houston and A. E. Houston.

Okla., Carmen—Automobiles.—J. H. Curtis Auto Exchange will construct (no contract) \$5000 building; 60x100 ft.; brick walls; cement floor; has purchased equipment, cost \$1500; Ford agency. (See Machinery Wanted—Heating Plant.)

Okla., Mangum—Garage.—W. S. Bradshaw contemplates erecting garage.

Tenn., Memphis—Automobiles.—Southern Motor Co., capital \$50,000, incptd. by S. H. Butler, J. M. Connable, R. E. McKellar and others.

Tenn., Nashville—Trucks.—Federal Bob Brannon Truck Co., capital \$10,000, incptd. by R. A. Branne, E. C. Higgins, A. H. Mixell and others.

Tex., Houston—Garage.—Leland Automobile Co., F. W. Leland, Pres. and Gen. Mgr., will erect garage; 125 ft. sq.; for salesrooms and service stations. (Lately noted incptd.)

Tex., Port Arthur—Automobiles.—Texas Motor Co., capital \$3000, incptd. by T. E. Linn, E. P. Baker, M. H. Schey and others.

Va., Norfolk—Garage.—S. C. Pace will erect garage; 2 stories; brick; bids opened Dec. 11.

W. Va., Huntington—Automobile-wheel Spokes and Rims.—Turner, Day & Woolworth Handle Co. will re-equip and operate Huntington Handle Co.'s plant for manufacture of spokes and rims for automobile wheels; estimated cost, \$25,000.

W. Va., Huntington—Garage.—Gem Garage Co., capital \$10,000, incptd. by M. J. Ferguson, S. V. Williams, C. H. Williams and others.

ROAD AND STREET WORK

Ala., Eutaw—Greene County Comms. let contract O'Brien Construction Co. of Birmingham at \$8019.49 to construct chert road 4 mi. long between Eutaw and Tuscaloosa County line. (Lately noted inviting bids.)

Ala., Moulton—Lawrence County will construct macadam road from Courtland, south 5 mi. on Landersville Rd.; Court of Revenue receives bids until Jan. 8; J. C. Kumpke, Judge of Probate. (See Machinery Wanted Road Construction.)

Ark., Stuttgart—City let contract W. B. Bell of Van Buren, Ark., to construct 4 mi. of curb and gutter.

D. C., Washington—Dist. Comms. will grade streets and alleys, aggregating 9200 cu. yds.; bids until Dec. 21. (See Machinery Wanted—Grading.)

Fla., Arcadia—City let contract to Stidham & Hughes, Limestone, Fla., for 158,000 sq. yds. asphalt concrete and to Fargo Construction Co., Jacksonville, for 140,000 ft. curb and gutter; Cravens & Kimmel, Engrs., Parker Bldg., Arcadia, Fla. (Noted in Sept., with Stidham & Hughes having tentative contract at \$145,395.40 for grading, foundations, asphalt, concrete paving and concrete bridges; and Fargo Construction Co. with tentative contract at \$50,550 for concrete curb, gutters and headers.)

Fla., Bradentown—Manatee County will construct 20 mi. hard-surfaced roads, 4 bridges and such other structures as are necessary to complete roads in Englewood Special Road and Bridge Dist.; 92,000 cu. yds. excavation; 105,600 sq. yds. rock surface; 140 cu. yds. concrete in culverts; 4 concrete, steel and wood bridges, 54, 90, 108 and 230 ft. long, respectively, latter to be provided with steel swing draw allowing clear opening of 30 ft.; bids until Jan. 8; Robt. H. Roesch, Clerk County Comms. (See Machinery Wanted—Road and Bridge Construction.)

Fla., De Land—Volusia County Comms. let contract F. G. and A. C. Proudfoot of Tampa at \$100,000 to construct road in Halfax Special Road and Bridge Dist., Section 2-A and Section 2-B; 47,320 lin. ft. roadway; 9 mi.; require about 1,000,000 asphalt blocks. (Noted in Oct. as inviting bids.)

Fla., Fort Myers—Lee County, Road and Bridge Dist. No. 3, let contract J. B. McCrary Co., Atlanta, Ga., at \$111,800 to clear and grade road from Marco to Dade County line.

Fla., Lakeland—City, John F. Cox, Mayor, will pave 13,800 sq. yds. street with sheet asphalt, asphalt block or brick; about 12 mi.; also grade, curb and gutter; bids until Jan. 19; J. W. Turner, Engr. (See Machinery Wanted—Paving.)

Fla., Lynn—City, P. C. Dixon, Mayor, issued \$10,000 bonds for completion of road and dock improvement.

Fla., Ormond—Bond Trustees, J. Milligan, Chrmn., let contract to Alabama Paving Co., Birmingham, Ala., to construct 22,000 sq. yds. hard surface and improvements to dock; cost \$35,000; Engr., C. M. Rogers, Daytona. (Bids noted in Nov.)

Fla., St. Petersburg—City, W. J. Overman, Director Public Works, will open bids Dec. 22 on 8000 sq. yds. brick paving. (See Machinery Wanted—Paving.)

Ky., Earlington—City, W. E. Rash, Mayor, will expend \$15,000 (bonds lately noted voted) on macadamizing about 3 mi. streets and constructing concrete gutters.

Ky., Earlington—City Com., F. B. Arnold, Treas., will construct about 3 mi. macadam streets; probably open bids in April or May; \$15,000 available. (Bonds lately noted voted.)

Ky., La Grange—Oldham County, S. E. De Haven, County Judge, will issue \$50,000 bonds for construction of roads and bridges during 1917.

La., Lake Charles—City will construct cement sidewalk on east side of Boulevard between 5th and 7th St. in front of and abutting high school property; School Board, Jas. N. Yeager, Supt., receives bids until Dec. 21. (See Machinery Wanted—Paving.)

Md., Baltimore—City will grade and pave with concrete-cement alleys listed in private alley contracts Nos. 16 and 17; bids until Dec. 20; Geo. M. Boteler, Acting Highways Engr. (See Machinery Wanted—Paving.)

Md., Baltimore—City will construct cement footways around city property in various parts of city; Group No. 9; bids until Dec. 20; Geo. M. Boteler, Acting Highways Engr. Lately noted. (See Machinery Wanted—Paving.)

Md., Ocean City—Isle of Wight Land Co. will construct 7 mi. concrete road, also sidewalk.

Md., Towson—Baltimore County Comms. will improve Wiseburg Rd. for 1 1/4 mi. to Northern Central Ry.; State aid; also plans to improve Joppa Rd. from Harford to Belair Rd.

Miss., Aberdeen—Monroe County Supvrs., G. G. Ray, Clerk, will issue bonds to construct roads in Supervisors Dist. No. 3.

Miss., Leakesville—Greene County Supervisors issued \$100,000 road bonds; will cooperate with Government in construction of 2 auxiliary highways through county.

Miss., Oxford—Lafayette County, Taylor Rd. Dist., Beat 4, J. C. Treloar, J. M. Tatum and J. E. Walker, Road Comms., let contract to D. T. Mitchell, Jackson and Taylor, Miss., to construct 14 mi. sand and clay road; will let contract Dec. 29 for 13.3 mi. additional; \$30,000 available; Snowden & Hauser, Engrs., Jackson and Columbus, Miss.; D. A. Hill, Jr., Res. Engr.; bids for 14 mi. noted in Nov. (See Machinery Wanted—Road Construction.)

N. C., Albemarle—Town Comms. will pave 1 mi. of streets.

N. C., Franklin—Macon County, Cowee Township, votes Jan. 15 on bonds to grade and macadamize roads. Elmer Johnson, Clerk County Comms.

N. C., High Point—City let contract R. G. Lasser & Co., Oxford, N. C., to pave sections of Johnson, Guilford and Greensboro Aves., etc., with sheet asphalt on 4-in. concrete base; city will also plan paving of additional streets with sheet asphalt, including sections of Hamilton, East Commerce, East Russell, West Green, West Commerce and other streets. Arthur Lyon, City Engr.

N. C., Salisbury—City let contract Charlotte Paving Co., Charlotte, at about \$30,000, to pave South Main St. with concrete; width 35 ft.; length 1 mi.

N. C., Washington—City is considering street paving. Address The Mayor.

Okla., Bartlesville—Washington County defeated \$600,000 bonds to construct concrete highway across county, 47 mi.; plans voting again in Apr. Address County Comms. (Noted in Oct. to vote.)

Okla., Muskogee—City is reported as contemplating vote on \$60,000 bonds to pave streets. Address The Mayor.

Okla., Sapulpa—City let contract John E. Nolan at \$3,373.14 to pave Poplar St.

Okla., Tahlequah—Cherokee County votes Dec. 22 on \$100,000 bonds to improve roads and construct bridges. Address County Comms. (See Bridges, Culverts, Viaducts.)

S. C., Greenwood—City, C. P. Ballenger, Engr., will expend \$7500 on lately-noted street paving; 5000 to 6000 yds.; date of opening bids not set. (Recent item incorrectly under Greenville.)

Tenn., Hohenwald.—Lewis County voted \$100,000 bonds to construct roads. Address County Comms. (Noted in Oct.)

Tex., Dallas—City Com. let contract at \$19,785 to Texas Bitulithic Co., Dallas, to pave San Jacinto Street, from Annex to Garrett.

Tex., Dallas—City let following paving contracts: To Western Paving Co., Oklahoma City, Okla., at \$4900.56, Woodlawn Ave., from Canty to Concho; Standard Engineering & Construction Co., Dallas, at \$66,469.50, for asphalt rock on 12th St., between Lancaster and Tyler; also at \$11,333.16 for paving Harrison Ave., from Grand to Santa Fe tracks; to Vibrolithic Construction Co., Dallas, at \$875.44, for paving on Hibernia, between Routh and Worthington Sts.; J. F. Ketcher Co. is lowest bidder at \$1500 for Sanger Ave. curbs and walks.

Tex., Hallettsville.—Lavaca County will construct 10 mi. graveled road in Road Dist. No. 1; County Comms. receive bids until Dec. 20. (See Machinery Wanted—Road Construction.)

Tex., Lefors.—Gray County defeated \$40,000 bonds for road construction. (Noted in November.)

Tex., Plainview.—City, W. E. Riser, Mayor, will construct paving in spring; bonds.

Tex., Plainview.—City contemplates vote on bonds to improve streets and sidewalks. Address The Mayor.

Tex., San Marcos.—Hayes County will vote Jan. 6 on \$75,000 bonds to construct roads in Buda Precinct. Address Clerk County Commrs.

Tex., Snyder.—City will pave public square and principal streets. Address The Mayor.

Va., Cumberland.—Cumberland County will construct .42 mi. of approach to bridge over James River at Columbia; bids until Dec. 21; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Paving.)

Va., Petersburg.—City is considering \$250,000 bond issue to pave streets and extend sewer and water mains. N. T. Patteson, Chrmn. Finance Committee.

Va., Portsmouth.—Norfolk County Com. on Roads and Bridges let contract J. U. Addenbrook's Sons, 307 Arcade Bldg., Norfolk, at \$8000 to construct $\frac{3}{4}$ mi. of Churchland Blvd.

Va., Portsmouth.—Norfolk County Com. on Roads and Bridges let contract J. U. Addenbrook's Sons, 307 Arcade Bldg., Norfolk, at \$8000 to construct $\frac{3}{4}$ mi. of Churchland Blvd.; concrete road; this contract being for additional amount to Churchland Rd., contract noted let in June to J. U. Addenbrook's Sons.

Va., Rustburg.—Campbell County will construct 1 mi. bituminous penetration macadam on Langhorne Rd., between Boonsboro Rd. and Carroll's Gate; Brooksville Dist. Road Board, Jno. T. McKinney, Chrmn., 1114 Peoples National Bank Bldg., Lynchburg, receives bids until Dec. 16; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Road Construction.)

W. Va., Cameron.—City will vote on \$60,000 bonds to be expended as follows: \$25,000 for paving, \$25,000 for sewer construction and \$10,000 to extend water system. Address The Mayor. (Noted in Aug. as to vote on bonds.)

W. Va., Fairmont.—City voted \$40,000 bonds to open and improve streets and build culvert over Bell Run; \$7500 to pave 2 bridges with wooden blocks; Anthony Bowen, Mayor. Lately noted to vote. (See Bridges, Culverts, Viaducts.)

W. Va., Huntington.—City will grade, curb and pave with vitrified brick First St., from 11th to Belford Ave.; also various lateral sewers as follows: 975 ft. 12-in. tile, 900 ft. 10-in. tile, and 445 ft. 8-in. tile; City Commrs. receive bids until Dec. 22; O. H. Wells, Commr. of Streets, etc.; A. B. Maupin, City Engr. (See Machinery Wanted—Paving and Sewer Construction.)

W. Va., Lewisburg.—Greenbrier County Commrs. engaged W. E. Dougher of White Sulphur Springs, W. Va., to construct roads provided for in \$100,000 bond issue.

W. Va., Pineville.—Wyoming County will construct earth roads in 6 sections of 8, 10, 13, 17, 12 and 16 mi., respectively; work consists of grading and construction of small drainage structures; bids until Dec. 23; Will P. Cook, Clerk County Court. (See Machinery Wanted—Road Construction.)

W. Va., Wheeling.—Ohio County Commrs. let contract Ball Engineering Co., Wheeling, at \$40,000 to pave with asphalt 5 mi. of road on Peters Run from National Pike to Bloch's Hill.

SEWER CONSTRUCTION

Fla., Arcadia.—City let contract to Florida National Vault Co., Lakeland, Fla. (noted in Sept. as having tentative contract) at \$39,000, for sewer and water construction; Cravens & Kimmel, Engrs., Parker Bldg., Arcadia.

Md., Hagerstown.—City let contract Thos. Connor & Sons, Bank and Trust Bldg., Greensburg, Pa., at \$70,860 to construct first section of outfall sewer; length 400 ft.; diam. 54 in.; includes 1100 ft. tunneling, manholes, foundations, etc.; Henry Davis, City Clerk. (See Machinery Wanted—Electric Motors.)

Mo., Higginsville.—City will invite bids about Jan. 1 to construct main outlet sewer and sewage-disposal plant; Burns & McDonald, Engrs., 400 Interstate Bldg., Kansas City, Mo. (Noted in Oct. to have voted \$22,000 bonds to construct sewers and disposal plant, complete system to cost \$50,000.)

Okla., Ringling.—City let contract MacIntosh-Walton Engineering Co., Oklahoma City, to construct sanitary sewer system; ditches from 4 to 15 ft. deep; mains to be 10, 8 and 6 in. in diam.; disposal plant; estimated cost, \$30,000; construction under supervision of W. A. French, Engr., Kaufman, Tex. (Lately noted.)

Okla., Kendall.—Town votes Dec. 21 on \$50,000 bonds to construct sewer system; C.

W. Johnson, Prest. of Board; Geo. H. Coe, Town Clerk.

Okla., Norman.—City is reported to have issued \$10,000 bonds for improvements to sewer system and water-works; J. W. Klingensmith, Engr.; J. M. Wise, City Clerk. (Noted in Sept.)

Okla., Tulsa.—City will construct sanitary sewer, including laterals, connections, etc., in Sewer Dist. No. 12; bids at office of City Auditor until Dec. 18; H. H. Wyss, City Engr. (See Machinery Wanted—Sewer Construction.)

Okla., Wynnewood.—City contemplates construction of sewers. Address The Mayor.

Tex., Bryan.—A. S. Adam, City Engr., completed plan for sewage-disposal plant to consist of Imhoff settling tank, sprinkling filter and settling tank, etc.; estimated cost \$15,000. (Lately noted to have voted \$10,000 bonds.)

Va., Petersburg.—City appropriated \$8500 to construct storm sewer on River St.; also considering \$250,000 bond issue for sewer and water extension and paving. N. T. Patteson, Chrmn. of Finance Committee.

W. Va., Cameron.—City will vote on \$25,000 bonds for sewer construction; noted in Aug. as to vote on bonds. Address The Mayor. (See Road and Street Work.)

W. Va., Fairmont.—City voted \$30,000 bonds to extend and improve sewer system; Anthony Bowen, Mayor. Lately noted to vote. (See Bridges, Culverts, Viaducts, etc.)

W. Va., Huntington.—City will construct lateral sewers as follows: 975 ft. 12-in. tile, 900 ft. 10-in. tile and 445 ft. 8-in. tile; also grade, curb and pave with vitrified brick First St., from 11th to Belford Ave.; bids until Dec. 22; O. H. Wells, Commr. of Streets, etc.; A. B. Maupin, City Engr. (See Machinery Wanted—Paving and Sewer Construction.)

TELEPHONE SYSTEMS

Tex., Greenville.—Greenville Telephone Co., capital \$125,000, inceptd. by A. C. Stuart, J. M. Terrell and L. A. Clark.

TEXTILE MILLS

Ark., Helena.—Cotton Yarn.—St. Francis Cotton Mills will add 5000 spindles and accompanying machinery; has ordered this equipment.

Ga., Monroe.—Cotton Goods.—Monroe Cotton Mills will install 300 looms; also undertake other improvements; has let contracts.

Md., Phoenix.—Cotton Goods.—Summerfield Baldwin, Jr., 117 W. Baltimore St., Baltimore, will establish cotton factory; utilize mill buildings and 136 acres lately purchased; has ordered machinery.

Mo., St. Louis.—Absorbent Cotton.—John T. Milliken & Co., Third and Plum Sts., will build 2-story 164x94-ft. brick construction mill; install machinery with daily capacity 4000 lbs. absorbent cotton; cost nearly \$200,000.

N. C., Conover.—Cotton Products.—Yount Cotton Mills, Newton, N. C., will erect 2-story 200x80-ft. brick building; day labor; Geo. W. Setzer, Engr.-Arch't., Newton; install 8168 spindles, frame driven electric system with 300 H. P. generator driven by steam engine; purchased all machinery except electric system. This supersedes Sept. item. (See Machinery Wanted—Electrical Machinery; Bricks.)

N. C., Ellerbe.—Knit Goods.—Ellerbe Knitting Mills (lately noted inceptd. with \$25,000 capital) organized; W. L. Howell, Prest.; B. B. Farlow, V.-P.; J. R. Bennett, Secy.-Treas.; erect building and install equipment. (See Machinery Wanted—Knitting Machinery; Building Supplies.)

N. C., Gastonia.—Cotton Goods.—Pinkney Mills, capital \$250,000, inceptd. by R. G. Pinkney, S. M. Boyce, W. G. Pinkney and others.

N. C., High Point.—Hosiery and Underwear.—Ames Hosiery Mills Co., capital \$35,000, inceptd. by Chas. L. Ames, J. W. Harris and Wescott Roberson.

N. C., Maysworth.—Cotton Yarn.—Mays Manufacturing Co. will add 20,000 spindles with accompanying machinery; has let contract for this new equipment.

S. C., Greenville.—Textile Fabrics.—Saluda Mfg. Co. organized with F. H. Cunningham, Prest.; E. C. Gwaltney, V.-P.; J. G. Cunningham, Secy.-Treas. (Lately noted inceptd. with \$15,000 capital.)

Tenn., Bristol.—Hosiery.—Bristol Hosiery Mills will add 200 knitting machines; has let contract.

Tenn., Knoxville.—Cotton Yarn.—Cherokee Spinning Co. organized; M. B. Melendy, Prest. and Gen. Mgr.; E. J. McMillan, V.-P.;

J. T. Brownlee, Secy.; J. E. Briscoe, Treas.; build 5000 spindle mill to spin fine combed yarns; J. E. Sirrine, Arch't.-Engr., Greenville, S. C. (Lately noted inceptd. with \$125,000 capital.)

WATER-WORKS

Fla., Arcadia.—City let contract to Florida National Vault Co., Lakeland, Fla. (noted in Sept. as having tentative contract), at \$39,000 for water and sewer construction; Cravens & Kimmel, Engrs., Parker Bldg., Arcadia.

Md., Baltimore.—Water Board, City Hall, approved plans prepared by Walter E. Lee, Water Engr., for enlarging and otherwise improving water distributing system in South Baltimore; will lay trunk main and several distributing cross connections.

Md., Indian Head.—Government will install motor-driven centrifugal pump, piping, fittings, valves, hydrants, etc., for extension to high-pressure fire system at Naval Proving Ground; Bureau of Yards and Docks, F. B. Harris, Ch., Navy Dept., Washington, D. C., receives bids until Dec. 26.

Mo., Stanberry.—City will construct 6 mi. of water-works extensions; will soon let contract; C. A. Greenlee, City Clerk.

Okla., Kendall.—Town votes Dec. 21 on \$45,000 bonds to construct water-works. C. W. Johnson, Prest. of Board; Geo. H. Coe, Town Clerk.

Okla., Mangum.—City defeated \$15,000 bonds to construct reservoir. (Lately noted.)

Okla., Norman.—City is reported to have issued \$10,000 bonds for improvements to water-works and sewer system; J. W. Klingensmith, Engr.; J. M. Wise, City Clerk. (Noted in Sept.)

Okla., Oklahoma City.—City, C. F. Semmelbeck, Clk., let contract to Ambursen Construction Co., 61 Broadway, New York, for construction of dams, etc., for which bids were lately noted; Ambursen Co. advises Manufacturers Record that contract includes 2 large dams, flood control works, emergency dam, brick and steel gatehouses, feed control system, 500 ft. reinforced conduit, etc.; this a part of city's new water-works system; \$1,500,000 bonds available for system's installation; H. M. Nabstedt, Res. Engr.; Guy V. McClure, City Engr.; H. A. Pressy, New York, Const. Engr.; system to be in operation within 18 months.

Okla., Weleetka.—The Water-works Co., C. A. Parish, Gen. Mgr., contemplates purchasing water meters to cost \$3000; also proposes constructing 2 settling basins and filtration plant, 500,000 gals. capacity, with motor-driven pumps.

Tex., Llano.—A. J. Zilker of Llano Milling & Manufacturing Co., reported to have let contract to Mr. Hornaday to construct filtration plant, capacity 300,000 gals. daily, for supplying city water; also install fire-plugs.

Tex., Palestine.—Palestine Water-Works Co., R. W. Baker, Prest.-Mgr. (Interstate Electric Corp., 141 Broadway, New York), will construct lately-noted filter plant at Pumping Station No. 2; cost about \$50,000; daily capacity 1,750,000 gals.; also replacing steam with electric pumps; building power plant.

Va., Abingdon.—Abingdon Water Co., capital \$100,000, inceptd.; E. J. Prescott, Prest., Big Stone Gap, Va.; Geo. E. Penn, Jr., Secy., Abingdon.

Va., Petersburg.—City is considering \$250,000 bond issue to extend water and sewer mains and pave streets. N. T. Patteson, Chrmn. Finance Committee.

Va., Vicksburg.—Norfolk & Western Ry., J. E. Crawford, Chief Engr., Roanoke, Va., is reported to erect coaling and water station at Vicksburg, 5 mi. from Christiansburg.

W. Va., Cameron.—City will vote on \$10,000 bonds to extend water system. Address The Mayor. (See Road and Street Work.)

WOODWORKING PLANTS

Ala., Akron.—Veneer.—Akron Veneer Co., capital \$3100, inceptd. by R. K. Deny, J. C. Parr and C. A. Stone.

Ala., Montgomery.—Sash and Doors, etc.—Cramton Lumber Co., F. J. Cramton, Prop., will manufacture sash, doors and cabinet work, in connection with planing mill to be constructed. (See Lumber Manufacture.)

Ark., Jacksonport.—Cooperage.—Arkansas Cooperage Co., capital \$10,000, inceptd.; G. H. Vogel, Prest.; L. L. Campbell, V.-P.; F. L. Vogel, Secy.-Treas.

Ga., St. Marys.—Shingles.—American Pine & Cypress Co., 603 Atlantic National Bank Bldg., Jacksonville, Fla., will establish plant to manufacture shingles, capacity 50,000

daily, in connection with sawmill operations. (See Lumber Manufacturing.)

Miss., Charleston.—Veneer and Box Shooks, Queen City Box Co., W. D. Sexton, Prest., and Maurice H. Tripp, Mgr., Horne, Wade, Flint Sts. and McLean Ave., Cincinnati, Ohio, will erect 170x20-ft. drykiln; construction by the company; install veneer lathe and box factory equipment; manufacture rotary cut gum veneer and sawed hardwood box shooks; $\frac{1}{2}$ carloads daily. (See Machinery Wanted—Veneer and Box Machinery.)

Miss., Union.—Veneer.—J. R. Buckwalter Lumber Co., lately noted to establish veneer plant, is planning to organize company to construct and operate veneer plant in connection this company's lumber business, utilizing the hardwood for veneer; later will advise definitely.

S. C., Columbia.—Excelsior.—W. M. Shannon, 1115 Barnwell St., advises is planning to construct excelsior plant. (See Machinery Wanted—Excelsior Machinery.)

S. C., Laurens.—Boxes and Crates.—Laurens Box & Crate Co. inceptd. by E. D. Easterby and H. Douglas Gray.

S. C., Sumter.—Box Factory.—J. W. Jackson, City National Bank Bldg., contemplates installation of box factory. (See Machinery Wanted—Box Machinery.)

Tenn., Binghamton.—Cooperage.—Chickasaw Cooperage Co., Memphis, Tenn., let contract L. T. Lindsey, Memphis, to rebuild burned plant. (Lately noted to rebuild plant burned at loss of \$300,000.)

W. Va., Richwood.—Wooden Utensils.—Fulton Mfg. Co., capital \$200,000, inceptd. by J. B. Dodge, H. H. Steele, W. B. Headley and others.

FIRE DAMAGE

Ala., Center.—Ellis Bros.' gin; loss \$11,900.

Ala., Muldrow.—W. O. Cauthon's cotton gin; loss \$10,000.

Ala., Mountain Creek.—Fox Maul cottage at Soldiers' Home; loss \$4000 to \$5000.

Ark., Fort Smith.—Leader Department Store; loss \$20,000.

Ark., Wilkins.—P. O. at Pine Bluff, Leo M. Andrews' cotton gin, 2 cotton-houses and seedhouse; loss \$15,000.

Ark., Sweet Home.—Sweet Home Gin Co.'s cotton gin; loss \$10,000 to \$12,000.

Ga., Cartersville.—Geo. G. Palmer's cotton gin and cotton house; loss \$8000.

Ky., Crestwood.—A. S. Hall's garage; loss \$10,000; J. E. Potts' market building; loss \$5000; Moss & Gibson's livery stables; loss \$8000.

Ky., Hickman.—James Laird's residence, owned by W. T. Owens.

Ky., Mammoth Cave.—Mammoth Cave Hotel and adjoining cottages; loss \$50,000.

Ky., Winchester.—Love Foundry Co.'s plant; loss \$5000.

Ky., Dawson Springs.—Mrs. C. A. Pence's hotel; bathhouse owned by Ruby Lumber Co. of Madisonville, Ky.; loss \$30,000.

Ky., Lexington.—Dr. R. C. Falconer's residence; loss \$3000.

Ky., Stamping Ground.—J. H. Hall's store, loss \$5000; E. H. Wright's store, loss \$4000; building occupied by D. C. Robinson and Odd Fellows' hall, loss \$5000; Citizens' Bank, loss \$7000; Mrs. T. C. Duvall's building, loss \$5000; T. E. Gayle's store, loss \$5000; Joe Johnson's store, loss \$4000.

Md., Brunswick.—Baltimore & Ohio R. R.'s transfer shed, warehouse and 14 box cars; loss \$100,000; R. N. Benglen, Chief Engr., Baltimore.

Md., Idlewild.—Joshua Register mansion on Hillen Rd., owned by Robt. M. Taylor, Towson, Md.; loss \$5000.

Md., New Windsor.—N. J. Royer's bank barn and hog pen; loss \$5000.

Mo., Adrian.—J. J. Brown's restaurant; Miller Shoe Store; loss \$6900.

Okla., Muldrow.—W. O. Cauthon's cotton gin; loss \$10,000.

S. C., Bishopville.—T. C. Perrin's residence.

S. C., Greenville.—Domestic Steam Laundry at East McBee and Brown Sts.; estimated loss \$20,000; building was owned by W. C. Cleveland.

S. C., St. Matthews.—J. L. Carroll's residence on W. Bridge St.

Tenn., Bristol.—Reynolds Corp.'s cleanser-product plant; estimated loss \$150,000.

Tenn., Humboldt.—J. A. Pearce's residence owned by J. T. Warren heirs.

Tenn., Jellico.—Little Elk Dairy; loss \$5000.

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Tenn., Murfreesboro.—S. M. Frey's store;
loss \$25,000; Barton Bldg. occupied by Reagor
& Littler, and Ben Ransan & Co.
Tex., Berclair.—Arrow Bros. Mercantile
Co.'s store; loss \$6000.
Tex., Brunner.—T. F. Loftus' residence.
Tex., Lockhart.—Dr. O'Banion's residence;
loss \$2500.
Tex., Longview.—Residences of Henry
Friedlander, Max Friedlander, H. B. Ziegler,
Zeke Robinson and L. Mandelberg; loss
\$20,000.
Tex., Lovelady.—Tremont Hotel and 5 bus-
ness buildings; loss \$50,000.
Tex., San Antonio.—W. A. Cochran's
dwelling; loss \$4000; Marcus W. Davis' dwell-
ing; loss \$4000.
Tex., San Marcos.—Rufus King's residence,
owned by Mr. Davis of Gonzales, Tex.; loss
\$200.
Tex., San Saba.—Park Hotel; loss \$10,000.

Va., Apalachicola.—Creel Bros.' commis-
sary.
Va., Danville.—J. H. Oakes & Son's store
at Brosville; loss \$5000.
Va., Lowesville.—Wilfred Grant's residence
near Lowesville.
W. Va., Parkersburg.—Roy Backus, resi-
dence; loss several thousand dollars.
W. Va., Weston.—Malloy Bros.' ice plant
and bottling works; loss \$40,000.

DAMAGED BY STORM

Ky., Madisonville.—Residence of Rufus
Jordan, Leslie Hawkins and Mrs. P. W.
Demons, near Vandetta.
La., Atlanta.—Catholic, Methodist and Bap-
tist Churches (address The Pastors); Lou-
isiana Ry. & Navigation Co.'s depot; Wm.
Edenborn, Pres't., Ilibernia Bank Bldg., New
Orleans; loss \$40,000.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

D. C., Washington.—John F. Newman has
plans by C. T. Rose, 311 Corcoran Bldg.,
Washington, for apartment-house at 1316 New
Hampshire Ave. N. W.; cost \$300,000.
Fla., Miami.—Carl G. Fisher, Indianapolis,
Ind., rejected all bids to erect store and
apartment building. (See Stores.)
Fla., Miami.—C. H. Watson will erect
apartment-house; 2 stories; 22x122 ft.; rein-
forced concrete; cost, including fittings, \$15-
00 to \$18,000; J. H. Sculthorpe, Archt.,
Miami.
Ga., Atlanta.—John D. Simmons will erect
2-story brick-veneer apartments (twin struc-
tures) at 18 Cleburne Ave.; cost \$50,000;
day labor.
Md., Baltimore.—Hamilton Apartments Co.
has plans by J. R. Forsythe, 4307 Penhurst
Ave., Baltimore, for seven 2-story frame
apartment-houses, 3601 3611 Forest Park Ave.,
and one west side Grantley Ave.; 5 to be
3x11 ft.; 2 to be 30x46 ft.; cost \$35,000.
Md., Baltimore.—George R. Morris, 533-45
Title Bldg., will erect triple type apartment-
house at Clifton and Hilton Aves.; 3 sto-
ries; 18 apartments; cost \$60,000.
Mo., Kansas City.—Irwin Engender will
erect business and apartment building. (See
Stores.)
Mo., Kansas City.—E. C. Haller will erect
3-story 6-apartment brick flat at 3316-18 Scar-
ritt St.; cost \$14,000.
Mo., Kansas City.—Hoffman Bros. will
erect 3-story 12-apartment flat; cost \$13,000.
Mo., Kansas City.—McGee & Pollard will
erect 3-story 6-apartment brick flat; cost
\$14,000.
Okla., Tulsa.—J. B. Smith will erect brick
and stone apartment-house; cost \$14,000.
Okla., Tulsa.—Tate Brady will erect 2
apartment-houses, 423 and 441 N. Main St.;
also 1-story residence at 421 N. Main St.;
cost \$30,000.
S. C., Spartanburg.—J. W. Allen acquired
Fleming property and contemplates erect-
ing apartment-house.
Tex., Dallas.—Mrs. Norma N. Tenison has
plans by C. P. Siler, 710 Southwestern Life
Bldg., Dallas, for 6-family apartment-house;
bollow tile and brick veneer; Barrett specifi-
cation roof; wood floors; hot-water heat;
electrical conduit lighting; interphones; cost
\$30,000; Mr. Sites also preparing plans for
4-apartment building. (Lately noted.)
Tex., Dallas.—John M. Colquitt, 697 Junata
Bldg., will erect apartment-house; 3x59 ft.;
12 rooms and 2 baths; frame; red cedar roof;
edge grain pine floors; natural gas heat;
electric lights; cost \$4500; plans and con-
struction by owner. (Lately noted under
Dwellings.)
Tex., El Paso.—W. L. Pringle will erect
\$5000 apartment-house.
Tex., El Paso.—Ramey Bros. will erect
tenement-house; 50x25 ft.; brick; tar and
gravel roof; wood floors; electric light; cost
\$4000; plans and construction by owner.
(Lately noted.)
Va., Richmond.—Virginia Realty & Con-
struction Co. will erect 3-story apartment-
house and four 2-story brick dwellings on
west side of Addison St.; cost \$20,000.

ASSOCIATION AND FRATERNAL

Fla., Lakeland.—Lakeland Lodge No. 1291,
B. P. O. E., is having plans prepared by
Bonfoey & Elliott, Tampa, for lodge build-

ing; 75x95 ft.; 3 stories; ordinary construc-
tion; composition roof; wood floors; gas
heat; electric lights; push-button type elec-
tric elevators; cost \$35,000; plans submitted
to contractors in about 10 days. (Lately
noted.)
Fla., Ybor City.—L'Unione Italiana is
having plans prepared by Bonfoey & Elliott,
Tampa, for fraternal building; 3 stories;
70x95 ft.; reinforced concrete; composition
roof; tile and wood floors; gas heat; elec-
tric lights; cost \$60,000; plans submitted to
contractors in about 2 weeks. (Lately noted
under Miscellaneous—Fla., Tampa.)
Mo., St. Louis.—Y. M. C. A., J. F. Mocker,
Secy., 2500 N. Grand Ave., is reported to
receive bids in February to erect building;
5 stories and basement; 100x160 ft.; cost
\$200,000; Wm. Wedmeyer, Archt., 324 Wain-
wright Bldg., St. Louis. (Lately noted.)
Tex., Brady.—A. P. & A. M. will erect
3-story reinforced concrete building.
Tenn., Morristown.—A. F. and A. M. will
let contract about Feb. 1 to erect Masonic
Temple; 3 stories and basement; brick and
stone; cost \$25,000 to \$30,000; M. C. Caldwell,
L. C. Grubb and H. F. Mims, Building Com.
Tex., Fort Worth.—Masonic Institute will
erect boys' dormitory; cost \$100,000; comple-
tion by Sept. 1.
Va., Wytheville.—I. O. O. F. will erect
building; 3 stories; storerooms on first
floor; offices on second; third for lodge
purposes.

BANK AND OFFICE

Ala., Huntsville.—Farmers' State Bank or-
ganized with T. T. Perry, Pres't.; leased
Hundley Bldg., and will convert into bank
building.
D. C., Washington.—Davidson & Davidson,
313 15th St. N. W., are reported to erect of-
fice building at 15th and K Sts.; 12 stories;
2 lower floors for owners; upper floors for
Federal Trade Commission; 103x34 ft.; 2 sto-
ries faced in bay-window effect, of rein-
forced concrete-block construction; upper
stories of poured concrete; reinforced steel;
windows, sashes, doors, etc., of monolithic
finish; fireproof; vapor vacuum heat; com-
pletion by June; investment \$200,000.
Fla., Lake Worth.—J. W. Means will erect
store and office building.
Ga., Macon.—Citizens' and Southern Bank
of Macon, Mills B. Lane, Pres't., will ex-
pend \$35,000 to \$50,000 to remodel building;
interior changed; Mowbray & Uffinger,
Archts., 56 Liberty St., New York. (Lately
noted contemplating erecting building.)
Mo., Kansas City.—Geo. E. Bowling and J.
D. Bufton will erect office building, etc., to
be leased to Kansas City Feature Film Co.
(See Theaters.)
Va., Wytheville.—I. O. O. F. will erect
building to contain offices. (See Association
and Fraternal.)
W. Va., Huntington.—Union Savings Bank
& Trust Co., Geo. S. Wallace, Pres't., will
erect building to cost about \$75,000.

CHURCHES

Ala., Gadsden.—First Methodist Church
indefinitely postponed erection of Sunday-
school building; 2 stories; brick and stone;
cost \$18,000; T. L. Brodie, Archt., Jefferson
County Bank Bldg., Birmingham. (Previ-
ously noted.)
Ark., Conway.—First Presbyterian Church,
Rev. J. William Boyer, Pastor, will erect

manse; 6 rooms and sleeping porch; bunga-
low style; brick; probably slate roof; hard-
wood floors; electric lights, cost \$2500; side-
walks about \$25; construction begins in
about 2 weeks. (See Machinery Wanted—
Building Materials; Electric Equipment.)

Fla., Jacksonville.—Church of the Good
Shepherd is having plans prepared by J. W.
C. Corbuser, Cleveland, O., and Mellen C.
Greely, Jacksonville, for church and parish-
house, latter to be erected first at cost of
\$40,000, and to be used for church pending
erection of church building. (Lately noted.)

Fla., Tampa.—Hyde Presbyterian Church
has plans by F. J. Kennard, Tampa, for
building; brick; 40x50 ft.; tile roof; cost
\$15,000; bids opened Dec. 20.

Ga., Athens.—First Baptist Church, Rev.
James W. Lynch, pastor, will erect building.
Ga., Hawkinsville.—Baptist Church is hav-
ing plans prepared by Jas. J. Baldwin, An-
derson, S. C., for building.

Ga., Ocala.—Baptist Church is having
plans prepared by Jas. J. Baldwin, Anderson,
S. C., for church building. (Lately noted.)

Ga., Rochelle.—Methodist Episcopal Church
South, Rev. J. M. Foster, pastor, has plans
by Chas. W. Carlton, Lagrange, Ga., for
building; 60x60 ft.; brick veneer; asphalt
shingle roof; wood floors; warm-air heat;
electric lights; cost \$3000. Address The Pas-
tor. (Lately noted.)

Ga., Toombsboro.—Baptist Church will erect
building. Address The Pastor.

Ga., Willacooche.—Methodist Church will
erect building; brick; cost \$6000. Address
The Pastor.

Mo., Columbus.—Methodist Episcopal
Church, Rev. C. C. Grimes, Pastor, is re-
ported to erect \$150,000 building.

Mo., St. Louis.—Overland Park Baptist
Church, Rev. N. E. Aregood, pastor, will
erect building.

N. C., Morgantown.—First Episcopal Church,
A. A. Hilton, Pastor, is having plans pre-
pared for building.

N. C., Washington.—Christian Church will
erect parsonage. Address The Pastor.

Okla., Drumright.—First Baptist Church
opens bids Dec. 18 to erect building; address
Rev. R. W. Lackey or W. L. McAttee, Archt.,
Drumright.

Okla., Stillwater.—Christian Church will
erect building; 70x85 ft.; brick and concrete;
tin roof; concrete basement floor; other
floors, wood; steam heat; electric lights;
cost \$5,000; A. A. Honeywell, Archt., Ko-
komo, Ind. Address Virles Williams, Still-
water. (Lately noted.)

Okla., Tipton.—Methodist Episcopal
Church South will erect building; 82x62
ft.; furnace heat; bids probably opened in
January; cost about \$15,000. (Lately noted.)

Okla., Tulsa.—Church of Christ, Scientist,
will erect building at Boulder and 11th Sts.;
1 story and basement; light buff brick; Car-
thage granite trim; main auditorium to seat
700; heating and ventilating system; cost
\$50,000; including furnishings, \$65,000 to \$70,
000. Address The Reader.

S. C., Due West.—Associate Reformed
Presbyterian Church is considering erecting
building. Address The Pastor.

Tenn., Cleveland.—First Baptist Church
will erect building lately noted; main audi-
torium 58x64 ft., Sunday-school annex to
rear 55 ft.; brick; composition roof; hard-
wood floors; electric lights; concrete side-
walks; cost \$20,000; 3 furnaces, about \$150
each; A. R. Baumann, Archt., Knoxville.
Address J. D. Barnes, Chrmn. Building Com.
(See Machinery Wanted—Heating Plant;
Electric Supplies; Water Heater; Art Glass
Windows; Seating.)

Tex., Goliad.—Baptist Church will erect
building. Address The Pastor.

Tex., Paris.—First Christian Church will
erect 2-story-and-basement brick building;
cost \$40,000.

Va., Mt. Vernon.—Pobick Church, Rev. E.
W. Mellichampe, Rector, has plans by Glenn
Brown of Glenn Brown & Bedford, 806
Seventh St. N. W., Washington, D. C., for
improvements to building, to include heating
plant, colonial windows, brick wall around
churchyard, grading, etc.

W. Va., Huntington.—Trinity Episcopal
Church will erect parish-house. Address
The Pastor.

CITY AND COUNTY

Ky., Lexington.—Comfort Station.—City is
having plans prepared by Lincoln Fel-
heimer, Cincinnati, for comfort station.

Mo., Joplin.—City Hall.—City plans to vote
on bonds to erect city hall. Address The
Mayor.

Okla., Kendall, P. O. at Tulsa.—Fire Sta-
tion.—City votes Dec. 28 on \$15,000 bonds to
erect and equip fire station. Address The
Mayor.

Okla., Tulsa.—Fire Station.—City, Frank
Newkirk, Auditor, receives bids until Dec.
18 to erect fire station in Siege Addition;
cottage bungalow type; cost \$5000; plans
and specifications at office Mr. Newkirk as
above; Rush, Endicott & Rush, Archts.,
Tulsa. (Lately noted.)

Okla., Woodward.—City Hall.—City re-
ceives plans and specifications until Dec. 18
for city hall for which \$50,000 bonds were
voted; building to include municipal offices,
fire station and auditorium to seat 2000;
H. H. Alexander, City Clerk. (Lately
noted.)

Tex., Brownwood.—Fire Station, etc.—City
votes in January on \$110,000 bonds; \$80,000
for school building; \$30,000 for combination
city hall and fire station. Address The
Mayor. (Lately noted.)

Va., Lynchburg.—Alms-house.—City is con-
sidering erecting alms-house and tuberculosis
hospital on city farm. Address Mayor
Jester.

Va., Richmond.—Dwelling.—City has plans
by Carneal & Johnston, Richmond, for 1-story
frame dwelling at city farm; bids opened
Dec. 13.

W. Va., Fairmont.—Fire Station.—City
voted \$7500 bonds to erect fire station on
east side; Anthony Bowen, Mayor. (See
Bridges, Culverts, Viaducts, etc.)

COURTHOUSES

Ga., Leesburg.—County Commrs. will erect
courthouse; hollow tile, brick and reinforced
concrete; 2 stories; low pressure, 1-pipe
steam heat; electric work in conduit; cost
\$10,000 to \$15,000; J. J. Baldwin, Archt., An-
derson, S. C.

Tex., Woodboro.—County voted \$75,000
bonds to erect courthouse. Address County
Commrs.

DWELLINGS

Ala., Alabama City.—Dwight Manufactur-
ing Co. will erect 40 dwellings for employes;
cottage type.

Ala., Demopolis.—J. O. Downs, Boaz, Ala.,
will erect residence.

Ala., Gadsden.—Dr. W. T. Cantrell, Ala-
bama City, is erecting three 4 and 5-room
dwellings in Smithfield.

Ala., Gadsden.—H. P. Smith is erecting
three 5 and 6-room residences at Smithfield.
Ark., Little Rock.—F. W. Brodnax will
erect residence.

D. C., Washington.—G. D. P. Bailey, 404
7th St. N. W., will erect 2-story brick dwell-
ing at 805 N. St. N. W.; cost \$19,000.

D. C., Washington.—Phillip M. Riley, 4509
Wisconsin Ave. N. W., will erect 2-story
frame dwelling at 496 41st St. N. W.; cost
\$3000.

D. C., Washington.—Chas. A. Davis has
plans by F. L. Haller, 447 Lamont St. N. W.,
Washington, for 2-story brick store and
dwelling at 2551 Georgia Ave. N. W.; cost
\$2500.

D. C., Washington.—Winfield Preston has
plans by C. C. Jones, 322 Maryland Ave. N.
W., Washington, for dwellings at 825-25-30-32-
34 Allison St. N. W.; cost \$15,000.

D. C., Washington.—Arthur Carr has plans
by Cloughton West, 217 Colorado Bldg.,
Washington, for two 2-story brick dwellings
at 3205-07 38th St. N. W.; cost \$10,000.

D. C., Washington.—D. J. Dunigan, Bond
Bldg., will erect six 2-story brick dwellings
at 701-11 Half St. S. W.; cost \$7200.

Fla., Bartow.—H. J. Fletcher has plans by
J. Rice Scott for residence; mission bunga-
low style; 2 stories.

Fla., Jacksonville.—H. B. Snell will expend
\$5000 to remodel residence.

Fla., Jacksonville.—H. F. McAden, 1555
Hubbard St., has plans by R. A. Benjamin,
Jacksonville, for dwelling; 24x53 ft.; shingle
roof; hardwood floors; wood and gas heat-
ing; cost \$4000; construction by owner.
(Lately noted.)

Fla., Miami.—Carl G. Fisher, Indianapolis,
Ind., rejected all bids to erect 3 dwellings at
Alton Beach; 2500 sq. ft. floor space each;
concrete walls, stuccoed; wood interior;
Spanish tile roof; wood floors; cost \$4500;
August Geiger, Archt., Miami, Fla. (Lately
noted.)

Fla., St. Petersburg.—Snell & Hamlett con-
template erecting 19 or more dwellings.

Fla., St. Petersburg.—Charles R. Hall is
reported to erect several dwellings.

Fla., West Palm Beach.—C. A. Nettleton
will erect residence.

Fla., West Palm Beach.—Joseph Bobo will erect 6-room residence.

Fla., West Palm Beach.—L. P. McCord will erect residence and garage.

Fla., West Palm Beach.—Palm Beach Savings & Investment Co. will erect residence.

Fla., West Palm Beach.—R. W. Washington will erect residence.

Fla., West Palm Beach.—C. J. Larrabee will erect dwelling.

Ga., Atlanta.—C. T. Dunham will erect 2-story frame dwelling; 8 rooms; cost \$3500.

Ga., Atlanta.—J. B. Daniel will erect 2-story brick-veneer dwelling; cost \$4500; day labor.

Ga., Savannah.—George W. Brinson, Prest. Midland Ry., Savannah, and W. M. Exley of Pineola, Ga., will develop town of Vincennes, near Savannah; erect postoffice, express office, number stores, 100 residences and auditorium; cost \$250,000; Allison & Allison, Architects and Landscape Gardeners.

Ga., Valdosta.—J. T. Mathis will erect residence; 8 rooms; brick veneer; rift pine floors; slate roof; cost \$7500; construction begins about Jan. 15; Lloyd Greer, Archt., Valdosta. (Lately noted.)

Ky., Louisville.—E. R. Moore will erect stucco dwelling; cost \$3500.

Ky., Louisville.—M. J. Murphy will erect \$3500 residence; brick construction.

Ky., Louisville.—Louis Keller & Son will erect brick-veneer dwelling; cost \$3000.

La., St. Bernard.—Freeport Mexican Fuel Oil Co. will erect 10 bungalows for employees.

Md., Baltimore.—Murray & Haynes, Garrison and Duvall Aves., will erect 1-story bungalow at 2908 Chelsea Ave.; 28x42 ft.; cost \$3900.

Md., Baltimore.—Frank Novak Realty Co., Harford Rd. and B. & O. R. R., has plans by Callis & Callis, 2055 Kennedy Ave., Baltimore, for 27 two-story brick dwellings, 1601 to 1653 E. 25th St.; 15x44 ft.; cost \$28,000.

Md., Baltimore.—Ernest C. Smith, 2141 Huntington St., is reported to erect residences at 13, 14, 15 and 16 Summit Ave.

Md., Baltimore.—George T. Carson, 35 N. Bentalou St., will erect residences at 31, 32 and 33 Summit Ave.

Md., Baltimore.—Frank O. Singer, Jr., 600 Equitable Bldg., will erect several dwellings at Brookfield Ave. and Brooks Lane.

Md., Baltimore.—Harry A. Allers, 1003 Emerson Bldg., has plans by Norman R. Allers for 1½-story frame bungalow; 35.6x65 ft.; cost \$6000.

Md., Baltimore.—T. O. Smith is having plans prepared by Clyde N. Friz, 1523 Munsey Bldg., Baltimore, for dwelling in Ten Hills; brick and frame; half timber; slate roof; cost \$12,000.

Md., Baltimore.—Henry F. Westheimer has plans by Edw. L. Palmer, Jr., Munsey Bldg., Baltimore, for dwelling and garage at Park Heights and Slade Aves.; contractors estimating are: G. Walter Tovell, Eutaw and McCulloh Sts.; E. G. Turner, Bateman Ave.; M. F. Kaylor, Park Heights and Rogers Aves.; Cox Bros., 22 Clay St.; John F. Kunkel, 29 S. Linwood Ave.; all of Baltimore.

Md., Baltimore.—James Keely has plans by W. B. Gerwig, 1028 N. Fulton Ave., Baltimore, for 20 dwellings at Winchester St. and Ashburton Ave.; 2 stories; brick; 14x45 ft.; cost \$42,000.

Md., Baltimore.—L. Silbert, 115 N. Broadway, has plans by Callis & Callis, 2055 Kennedy Ave., Baltimore, for 10 dwellings in 2900 block Riggs Ave.; 15x44 ft.; brick; tin roof; wood floors; electric lights; steam heat; cost \$20,000.

Md., Baltimore.—J. Murdock Dennis has plans by Edward L. Palmer, Jr., Munsey Bldg., Baltimore, for residence in Guilford; 2½ stories; brick; English type; slate roof; glassed-in conservatory; 30x70 ft.; garage in rear; cost \$25,000.

Md., Baltimore.—John R. Stotler, 506 N. Chester St., will erect residences at 27 and 28 Summit Ave.

Md., Hamilton.—Lohmuller Building Co., Taylor and Jackson Sts., Baltimore, will erect residences for Wesley J. Hales and J. Lawrence Rosenberg at Rosedale Ave. and Harford Rd. and Bachland Ave.; 2½ stories; frame; cottage type; cost \$2500 each.

Mo., Kansas City.—T. H. Broughman will erect two 2-story frame dwellings; cost \$4000.

Mo., Kansas City.—Clay Realty Co. will erect three 1-story frame residences; cost \$4500.

Mo., Kansas City.—Charles E. Goodman will erect six 1½-story stucco-veneer dwellings; cost \$3000.

Tex., El Paso.—Seth B. Orndorff has plans by Trost & Trost, El Paso, for residence; 40x40 ft.; 2 stories; shingle roof; cost \$12,000; bids opened Dec. 10.

Md., Baltimore.—Lohmuller Building Co., Taylor and Jackson Sts., will erect twelve 2-story porch-front dwellings on north side of 28th St., east of Barclay St.; cost \$24,000.

Mo., Kansas City.—C. A. Price will erect 1½ story stucco-veneer residence; cost \$3500.

Mo., Kansas City.—Cowherd Land Co. will erect two 1½-story stucco-veneer dwellings; cost \$9000.

Mo., Kansas City.—Fred Belleviere will erect 2-story frame dwelling; cost \$4000.

Mo., Kansas City.—W. A. Rupe will erect three 1-story stucco-veneer dwellings; cost \$5400.

Mo., St. Louis.—J. Charles Mueller has plans by Nolte & Nauman, St. Louis, for 22 two-story brick bungalows; 6 rooms; tile bath; sleeping porch; brick mantels; matt brick and colored mortar; gables, white stucco; black slate roofs; construction by owners under supervision of Architects.

N. C., Charlotte.—W. J. Brown will erect residence on Morehead Ave.

N. C., Franklin.—Frank Holmes, Newnan, Ga., plans to erect residence.

N. C., Franklin.—C. C. Cunningham will erect residence.

N. C., Franklin.—John Moore will erect residence.

N. C., Marion.—Carroll Baldwin of Marion & Clinchfield Cotton Mills, acquired Mount Ida and will develop, erect residence, construct automobile highway, etc.

Okla., Tulsa.—A. M. Karr will erect \$3000 residence.

Okla., Tulsa.—Blair Bros. will erect 2 frame residences, 317 and 322 S. Olympia St.; cost \$5500.

Okla., Tulsa.—G. J. Brockney will erect 2-story residence; cost \$3500.

Okla., Tulsa.—J. W. Bozath will erect residence; cost \$3000.

Okla., Tulsa.—Mrs. J. Lebur will erect \$3000 residence.

Okla., Tulsa.—R. E. Lozier will erect frame residence; cost \$5000.

Okla., Tulsa.—Tate Brady will erect residence, etc. (See Apartment-houses.)

Okla., Tulsa.—W. M. McFarlan will erect 2-story frame residence; cost \$3000.

S. C., Abbeville.—Abbeville Cotton Mills will erect 15 bungalows for employees.

Tenn., Memphis.—G. W. Barrow will erect 1-story 8-room frame and stucco residence; cost \$3000.

Tex., Dallas.—Carrie B. Pratt will erect 2-story 10-room frame residence; cost \$3250.

Tex., El Paso.—R. G. Chenoweth & Son will erect residence; cost \$4000.

Tex., El Paso.—W. H. Dennis will erect residence; cost \$30,000.

Tex., El Paso.—Mrs. Sidney Hockett is having plans prepared for 5-room bungalow; cost \$4000.

Tex., El Paso.—H. M. Whitfield will erect 2-story 10-room residence in Alta Vista; cost \$5500.

Tex., El Paso.—R. W. Ramming is having plans prepared for residence; 7 rooms; bungalow style; cost \$5500.

Tex., Fort Worth.—N. J. Matthews will erect \$3000 residence; frame.

Tex., Fort Worth.—C. H. Steele will erect \$20,000 residence; construction begins Jan. 1.

Tex., Houston.—A. B. Black is erecting \$10,000 residence in Southmore.

Tex., Houston.—D. Mullane will erect residence on San Jacinto St.; cost \$10,000.

Tex., Houston.—Etter D. Blanton is erecting residence in Southmore; cost \$6300.

Tex., Houston.—George King will erect residence; cost \$12,000 to \$14,000.

Tex., Houston.—Henry Falk is erecting \$5000 residence.

Tex., Houston.—Mrs. Susan V. Clayton will erect \$30,000 residence in Southmore.

Tex., Plainview.—S. T. Scalling will erect residence; frame; shingle or metal tile roof; wood floors; hot-air heat; electric plant; cost \$4500; bids opened in about 2 weeks; Smith & Townes, Archts., Grand Theater Bldg., Amarillo, Tex.

Tex., Stamford.—D. E. Bacon, Mgr., H. O. Wooten Grocery Co., will erect 8-room residence on East Reynolds Ave.

Va., Norfolk.—J. D. Stone will erect 2 frame residences; cost \$4300.

Va., Norfolk.—Willis Co. will erect 2 frame dwellings; \$3000 each.

Va., Richmond.—L. H. Mundin will erect two 2-story frame dwellings; cost \$6500.

Va., Richmond.—Virginia Realty & Construction Co. will erect residences, etc. (See Apartment-houses.)

Va., Roanoke.—Lindsey-Robinson Co. will erect 4-story brick-cased dwelling; cost \$12,000.

Va., Roanoke.—Thos. E. Payne will erect 2-story brick-cased residences; cost \$3000.

Va., Staunton.—Edward J. Wiley, Prest. Virginia Bond & Share Co., will erect residence.

GOVERNMENT AND STATE

Md., Cambridge.—Armory.—State Armory Commission receives bids until Dec. 20 at office Emerson C. Harrington, Governor, Union Trust Bldg., Baltimore, to erect 3 armory buildings; one at Cambridge, Md., Hyattsville, Md., and Westminster, Md.; bids for each separate building and for buildings as a whole; plans and specifications at office J. Ben Brown, Archt., Cambridge; following contractors are estimating: Chas. L. Stockhausen Co., Marine National Bank Bldg.; D. M. Andro Co., Mt. Vernon Ave. and 26th St.; Charles Herbold & Sons, 2768 W. North Ave.; John Waters Building Co., 23 E. Center St.; Price Concrete Construction Co., 214 Maryland Trust Bldg.; John L. Robinson Construction Co., 66 Knickerbocker Bldg.; H. D. Watts Co., 904-6 Garrett Bldg.; Henry S. Rippel, 7 Clay St.; Consolidated Engineering Co., Equitable Bldg.; C. E. Stubbs, 548 Equitable Bldg.; Cogswell-Koether Co., 406 Park Ave.; all of Baltimore; Thomas & Browne, Cambridge; Frank Ross, Easton, Md.; Charles B. Hunter and N. C. Erb, Westminster; Herman C. Burgess, Hyattsville, and Arthur L. Smith, 1111-1113 Woodward Bldg., Washington. (Lately noted.)

Md., Hyattsville.—See Md., Cambridge.

Md., Westminster.—See Md., Cambridge.

HOSPITALS, SANITARIUMS, ETC.

Miss., Charleston.—Lamb-Fish Lumber Co. opens bids about Dec. 20 to erect hospital; hollow tile and reinforced concrete; composition and tile roof; steam heat; Raymond B. Spencer, Archt., Jackson, Miss. (Lately noted.)

N. C., Asheville.—Appalachian Hall, Drs. Lewis G. Beall and Bernard R. Smith, Mgrs., have plans by Walter Dermitt for addition to building; cottage type, to include private sleeping porch for each room; private baths; hot and cold water; library; rest-room; billiard-room; basement and hydrotherapy department; brick, tile and marble; accommodate 12 patients; plan other cottages to accommodate 70 patients.

N. C., Greenville.—Pitt County defeated \$50,000 bonds to erect county hospital. (Lately noted.)

Tenn., Rockwood.—J. C. Wilson has plans by Manley & Young, Knoxville, Tenn., and Lexington, Ky., for hospital; 3 stories; 45x60 ft.; 20-bed capacity; brick; imitation pressed steel tile roof; hardwood floors; vapor vacuum heat; electric lights; cost \$10,000; construction begins Feb. 1. (Lately noted.)

Tex., Waco.—Providence Sanitarium will erect 3 additions to structure; 130x150-ft. addition on east side to be 7 stories; connected to main building by passageway; home for nurses on west side to be 4 stories; kitchen to south to be of white-faced brick; provide cold storage, etc.; cost about \$200,000.

Tex., Waco.—Central Texas Baptist Sanitarium opens bids Jan. 20 to erect sanitarium; 5 stories; 104x164 ft.; 100 rooms; reinforced concrete; cost \$150,000; Geo. Burnett, Archt., Waco. (Lately noted.)

Va., Lynchburg.—City is considering erecting almshouse and tuberculosis hospital on city farm. Address Mayor Jester. (See City and County.)

Va., Suffolk.—Drs. L. W. White, J. M. Gibson, John E. Phillips, W. C. Gibson, F. J. Morrison, R. H. Pretlow and C. E. Fedderman are promoting erection of General Hospital.

HOTELS

Ala., New Decatur.—Hotel Hilda plans to erect 60-room addition to building; 40 rooms to have shower baths.

Ark., Helena.—Business Men's League, L. J. Penney, Secy., contemplates inviting outside capital to erect hotel.

Md., Ocean City.—Isle of Wight Land Co. will erect hotel in connection with development of resort; concrete construction; 123x96 ft.; no stairs or elevator; also construct 7 mi. concrete road and 4 mi. sidewalk. (Lately noted.)

Miss., Meridian.—Union Hotel, P. C. Steele, Prest., increased capital stock to \$200,000 and will erect annex; 60 rooms; 5 stories; 22 baths; 8 sample rooms; fifth floor of main building for auditorium; cost \$40,000; fixtures \$15,000; construction begins in February; completion by fall.

N. C., Greensboro.—Chamber of Commerce is promoting organization of Greensboro Hotel Co. with \$75,000 capital, to erect hotel at Elm St. and Belmeade Ave.; "L" shape; fireproof; 166 guestrooms, ballroom, 2 stores, etc.; cost \$300,000; E. P. Wharton, Chrmn. Com.

Tex., San Angelo.—C. C. McBurnett opens bids Jan. 15 to erect hotel; 7 stories; fireproof; not less than 110 rooms, about 75 with baths; mezzanine and banquet hall on second floor; dining room on first floor to seat 200; roof constructed to permit converting into roof garden; refrigerating plant, elevators, vacuum cleaning system; 100x110 ft.; concrete floors; steam heat; cost \$150,000; completion by Sept. 18; Geo. Burnett Co., Archt., Waco, Tex. (Lately noted.)

MISCELLANEOUS

D. C., Washington.—Clubhouse.—Washington Athletic Club, C. H. Genslinger, Secy., Union Savings Bank Bldg., is having plans prepared by Milburn, Heister & Co., Union Savings Bank Bldg., Washington, for clubhouse on New York Ave. between 14th and 15th Sts. N. W.; 135x150 ft.; steel frame; fireproof; 13 stories, roof garden and basement; gymnasium can be converted into banquet hall to seat 1000; main dining-room to seat 600; flying-machine landing station on roof; 200 sleeping-rooms; 1000 steel lockers; electric lights; 17 miles water, gas, steam and air lines; 2,000,000 lbs. steel, 1,500,000 bricks, 10,000 ft. elevator cables, 1,000,000 ft. electric conduits, 3500 electric lamps, 600 electric-light fixtures, 500 windows, 300 telephones, etc., used in construction; cost of building, \$650,000; including site and fixtures, \$1,000,000. (Lately noted.)

Fla., Tampa.—Exposition Building.—South Florida Fair and Gasparilla Carnival Assn., A. L. Allen, Secy., will erect brick exposition building; bids opened Dec. 15; completion by Jan. 20.

Fla., West Palm Beach.—Clubhouse.—Woman's Club, Mrs. Harvey G. Geer, Prest., has plans by William B. Eckler, West Palm Beach, for building; 2 stories; reinforced concrete; auditorium to seat 500; cost \$8500.

Ga., Savannah.—Auditorium.—George W. Brinson and W. M. Exley will erect auditorium, etc. (See Dwellings.)

Ky., Louisville.—Clubhouse.—Athletic Club of Louisville has plans by Brinton B. Davis, Inter-Southern Bldg., Louisville, for clubhouse; brick, stone and terra-cotta; 5 stories; 120x200 ft.; Italian Renaissance style; lobby finished in marble; swimming pool on 3d floor; gymnasium on 4th floor, 60x80 ft.; basement to contain grillroom with tile floor, bowling alleys, billiard-room, furnace-room, etc.; 45 guestrooms; construction to permit erection of additional story; cost of site and building, \$300,000; equipment and furnishings, \$82,500.

La., New Orleans.—Clubhouse.—Boston Club plans to improve clubhouse.

La., Pineville.—Orphanage.—Catholic Orphans' Home Assn., Alexandria, La., will erect building No. 1 for orphanage; 90x48 ft.; 3 stories; fireproof; first floor concrete; steam heat, etc.; cost \$25,000; Rev. J. H. Cronenberger, Archt., Alexandria; plan 2 other buildings later.

Md., Baltimore.—Clubhouse.—Long Point Country Club, D. R. Perry, Prest., is having plans prepared by Wm. F. Stone, Jr., 55 Knickerbocker Bldg., Baltimore, for frame and stucco clubhouse on Magothy River.

Md., Hagerstown.—Convention Hall.—Board of Trade is promoting organization of company to erect auditorium for conventions; cost \$10,000.

Mo., St. Louis.—Cafe.—Charles P. Garavelli leased storeroom at 3612 Olive St. and will convert into cafe.

Tex., Cuero.—Hall.—Mohawk Club will improve Turner Hall; cost \$5000.

Tex., Paris.—Fair.—Lamar County Fair Assn. will erect grandstand and permanent exhibit buildings; cost about \$150,000.

RAILWAY STATIONS, SHEDS, ETC.

Ga., Macon.—Central of Georgia Ry., C. E. Lawrence, Ch. Engr., Savannah, will erect freight terminals at reported cost of \$500,000; concrete construction; plans prepared; bids not yet invited.

Ga., Savannah.—Midland Railway, George W. Brinson, Prest., will erect passenger station at Vincennes, 10 mi. from Savannah.

P. C. Steele, \$200,000 and stories; 22 or of main 600; fixtures February;

Commerce Greensboro erect hotel "L" shape; n. 2 stores, n. Chrmn.

net opens ories; fire- about 75 et hall on st floor to et converting plant, m; 100x10 cost \$150, d. Burnett noted.)

-Washing- Secy. ing plans Co., Union for club-

14th and el frame; and base- into ling-room g station steel lock- ter, gas, bs. steel, r cables, r electric 500 win- construc- ding site ed.)

-South- Assn., xposition letion by

house, -r, Prest., est Palm forced \$3500. rge W. et aud-

tic Club B. Davis, or club- ; 5 sto- e style; pool on 0x80 ft.; ith tile furnace- to cost of ent and on Club

lic Or- n. will ; 80x48 concrete; J. H. plan 2

Point having Jr., 55 frame ver.

-Board of com- ations;

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ETC. C. K. erect \$500; pared;

George or sta- ab.

N. C. Monroe.—W. D. Faucette, Chief Engr., Seaboard Air Line Ry. Co., Norfolk, Va., states he knows of no proposed changes or additions to passenger station at Monroe as lately reported.

Okla., Tulsa.—St. Louis & San Francisco Ry. F. G. Jonah, Ch. Engr., St. Louis, is reported to expend about \$200,000 to build passenger and freight depot. Mr. Jonah wires Manufacturers Record: "Matter only in tentative form; no plans yet drawn."

S. C., Spartanburg.—Carolina, Clinchfield & Ohio Ry., O. K. Morgan, Eng. in charge, Johnson City, states he knows of no office building to be erected by company at Spartanburg. (Lately noted.)

Tex., Temple.—Gulf, Colorado & Santa Fe Ry., F. Merritt, Chief Engr., Galveston, is reported to erect freight depot, transfer sheds and loading platforms; cost \$75,000.

Va., Richmond.—Atlantic Coast Line Ry., J. E. Willoughby, Ch. Engr., Wilmington, N. C., will construct freight warehouse and facilities; brick; built-up roof; brick floors; G. M. Poley, Archt., Wilmington; construction begins early in 1917.

Va., Suffolk.—Norfolk & Western Ry., J. E. Crawford, Ch. Engr., Roanoke, Va., will erect brick and concrete warehouse at freight station.

SCHOOLS

Ala., Birmingham.—Birmingham College will erect dormitory; pressed brick; cost about \$50,000.

Ark., Perry.—School Board plans to erect school; cost \$10,000 to \$12,000.

Fla., Pine Level.—Trustees plan to erect high school; cost \$8000.

Fla., Vero.—County Board of Public Instruction is considering election on \$40,000 bonds to erect school; plans by F. H. Trimble, Orlando, Fla., call for 1-story; brick and hollow tile or concrete; 12 classrooms; auditorium to seat 400; cost \$30,000; remainder for heating plant, equipment, etc.

Ga., Americus.—School Trustees issued \$30,000 bonds to erect third district agricultural school, to contain auditorium; Walter E. Steel, Chrmn. Trustees, Butler, Ga.

Ga., Conyers.—City voted \$20,400 bonds to erect school. Address The Mayor. (Lately incorrectly noted as Ala., Conyers.)

Ga., Ellaville.—City votes Dec. 18 on \$12,000 bonds to erect school. Address Rogers Williams, Secy. School Board.

Ga., Fitzgerald.—City votes Jan. 15 on \$23,000 school bonds. Address The Mayor. (Lately noted.)

La., Many.—Trustees are considering erecting \$40,000 school building.

La., New Orleans.—City is reported to issue \$5,000,000 bonds for school, storm emergency and public improvements. Address City Secy.

La., New Orleans.—Tulane University has plans by Frank G. Churchill, New Orleans, for first unit of proposed stadium; 153x61.2x 35.10 ft.; stuccoed; fireproof; concrete columns; hollow-tile and plaster walls; 3000 seats of cypress finish secured to concrete tiers; corridors full length of stand; ultimate plans call for stadium to seat 20,000. (Previously noted.)

La., New Roads.—City voted \$100,000 bonds for schools. Address Prest. of School Board.

Md., Baltimore.—School Board is having plans prepared by Alfred Cookman Leach, 228 N. Charles St., Baltimore, for addition to rear School No. 47, Eastern and Linwood Aves.; 24 classrooms; cost \$100,000. (Lately noted.)

Miss., Columbus.—City is considering bids of H. C. Terry, Columbus, and R. H. Byrd, Clarksdale, Miss., to erect S. D. Lee High School; ordinary construction; composition roof; joist floor construction; steam heat; P. J. Krouse, Archt., Meridian, Miss. (Lately noted.)

Mo., Mexico.—Westminster College plans to erect \$75,000 chapel; A. Reed, Prest.

N. C., Littleton.—School Board receives bids through L. J. Picot, Chrmn. Executive Com., Littleton, until Dec. 15 to erect brick school building; cost about \$16,000.

Okla., Tulsa.—City votes in January on \$460,000 school bonds. Address The Mayor. (Lately noted.)

Tenn., Ducktown.—Ducktown School Dist. has plans by W. H. Sears, Chattanooga, for grammar school; 10 rooms, assembly hall, gymnasium, manual training and domestic science department; cost \$13,500.

Tenn., McDonald.—McDonald School Dist. Trustees will erect 24x38-ft. addition to building.

Tex., Beaumont.—City has plans by Sanguinet, Staats & Gottlieb, Houston, Tex.,

for 6-room addition to Junker Ward School; cost \$20,000; bids opened Dec. 19. (Lately noted.)

Tenn., Cumberland Gap.—Lincoln Memorial University is having plans prepared by A. Lincoln Feckheimer, 1534 Union Trust Bldg., Cincinnati, for administration building; cost \$60,000.

Tex., Melon.—City voted \$5000 bonds to erect addition to school. Address The Mayor.

Tex., Bardwell.—Bardwell Ind. School Dist. voted \$25,000 bonds for site and erection of school; S. T. Collier, Prest. School Board. (Lately noted.)

Tex., Brenham.—Judge W. R. Ewing ordered vote Dec. 30 on bonds for improvements to schools.

Tex., Brownwood.—City votes in January on \$80,000 school bonds. Address The Mayor. (See City and County.)

Tex., El Paso.—Smelter School Dist. votes Dec. 26 on \$10,000 bonds to supplement \$15,000 bonds already available to erect school; 8 rooms; Myra C. Winkler, County Supt., El Paso. (Lately noted.)

Tex., Nacogdoches.—County Supt., Nacogdoches, receives bids until Dec. 15 to erect 2-story brick school; plans and specifications at office County Supt.

Tex., Pearl.—City is considering issuing bonds to erect school to replace burned structure. Address The Mayor.

Tex., San Antonio.—Rev. J. W. Shaw will erect \$4500 school building.

Tex., San Antonio.—Alamo Heights School Dist. No. 48 will erect addition to school; brick; tar and gravel roof; extension present heating plant; cost \$10,000; E. P. Behles and J. C. Williams, Archts., Hick Bldg., San Antonio. (Lately noted.)

Va., Newport News.—Wythe School Dist. will erect 4-room addition to George Wythe School; also erect 5-room school building in Union St.; latter to cost \$12,000. Address Dist. School Trustees.

Va., Portsmouth.—Jno. F. Wilson, Clerk School Board, receives bids until Dec. 21 for material and erection of schools as follows: (1) Erect high school at High St. and Fourth Ave.; (2) furnishing and installing heating and ventilating system for above mentioned school; (3) erect colored school; (4) furnishing and installing heating and ventilating system in colored school; (5) erect toilet room addition (including all fixtures) for Elm Street School; (6) erect toilet room addition (including all fixtures) for Glasgow School; plans and specifications at office Chas. M. Robinson, Inc., Archt., Times-Dispatch Bldg., Richmond, and office of Clerk of Board, Portsmouth. (Previously noted.)

W. Va., Charleston.—Board of Education, Secy., receives bids until Dec. 28 to erect Fernbank School in 10th Ward; plans and specifications at office James L. Montgomery, Archt., Charleston, and office School Board, High School building.

W. Va., Huntington.—Marshall College has plans by H. Rus Warne, Charleston, W. Va., for gymnasium and will soon call for bids; 160 ft. long; 2 stories and basement; swimming pool, showers, filtration plant, etc.

W. Va., Northfork.—Northfork School Dist. voted \$25,000 bonds to improve and erect additions to high and graded schools at Northfork, high and graded schools at Elk Ridge and improvements to other schools; A. D. Rice, Prest. Board of Education, Worth, W. Va.

STORES

D. C., Washington.—Chas. A. Davis has plans by F. L. Haller, 447 Lamont St. N. W., Washington, for store and dwelling. (See Dwellings.)

Fla., Miami.—Carl G. Fisher, Indianapolis, Ind., rejected all bids to erect store and apartment-house; 2 stories; 60x20 ft.; concrete walls stuccoed; wood interior; Johns-Manville roof; cost \$4000; August Geiger, Archt., Miami. (Lately noted.)

Fla., Lake Worth.—J. W. Means will erect store and office building; stucco; plate-glass front.

Fla., West Palm Beach.—J. A. Bowrey will erect 1-story building.

Ga., Augusta.—J. Goldberg & Son acquired property at Broad and 11th Sts. and adjoining property; will erect 50-ft. extension to structure they now occupy; construct 4 stores on 11th St. building; convert Broad St. structure into 2-story building with terra-cotta front.

Ga., Riddleville.—John Y. Bryan will erect brick store building.

Ga., Savannah.—George W. Brinson and W. M. Exley will erect stores, etc. (See Dwellings.)

Ga., Savannah.—Jas. B. Copps will erect 2-story building.

Ga., Springfield.—J. V. Norton will erect store building.

Ky., Irvine.—Jas. A. Wallace will erect store building to replace structure lately noted damaged by fire; 20x60 ft.; brick; metal roof; wood floors; steam heat; electric lights; concrete sidewalks; cost \$3000; construction, by owner, begins Jan. 1.

La., Lake Charles.—P. T. Plaque will erect brick building; cost \$4400.

Md., Baltimore.—G. F. Buchholz, 321 W. Monument St., will convert residence at 909 N. Charles St. into store.

Md., Baltimore.—Following contractors are estimating on remodeling building at 319 W. Baltimore St. according to plans by Benjamin Frank, 328 N. Charles St., Baltimore: Consolidated Engineering Co., Equitable Bldg.; B. F. Bennett Building Co., 123 S. Howard St.; Walter E. Burnham, Law Bldg.; Cogswell-Koether Co., 406 Park Ave.; Charles L. Stockhausen Co., Marine Bank Bldg.; Henry Smith & Sons Co., 7 E. German St., all of Baltimore.

Miss., Blnford.—Thos. Alexander Bradley, R. F. D. No. 4, Aberdeen, Miss., will erect store building to replace structure lately noted damaged by fire; 30x50 ft.; brick; metal roof; concrete floors; store; lighting not decided; construction begins in 10 months.

Mo., Kansas City.—J. C. Nichols has plans by Frederick H. Michaelis for business block on Brookside Blvd.; English type.

Mo., Kansas City.—Irwin Engender will erect 2-story brick business and apartment building; cost \$4000.

Mo., Kansas City.—John D. Seltz and Jay Shidley will probably erect business building on old Shidley Home site.

N. C., Wilson.—G. R. Sealeby & Bro. will erect 2-story brick store; cost \$10,000.

S. C., Columbia.—W. J. Conway & Co. will erect brick business building on Taylor St.

S. C., Spartanburg.—Laurence P. Sims will erect previously noted store and warehouse buildings; brick; tin or gravel roof; elevator; construction by owner. (See Machinery Wanted—Roofing; Elevator.)

S. C., Spartanburg.—Mrs. Minnie Trimmer will erect brick business building.

Tenn., Bristol.—John A. Mahoney has plans by Thos. Brown, Bristol, for improvements to Harnelling Bldg., to be occupied by Doss Bros.; will construct front, additional story, install electric elevator, provide skylight with ventilation in center of building, etc.

Tenn., Memphis.—B. G. Lee will erect 2-story fireproof business building; cost several thousand dollars.

Tex., Bonham.—Smith-Moore-Williams Co. will erect addition to building.

Tex., Crockett.—H. J. Arledge will erect store building to replace structure lately noted damaged by fire; 100x36 ft.; 7 store-rooms; tile construction; iron or composition roof; wood floors; brick flues; electric wiring; concrete walk; cost not determined; contract will be let privately; construction begins in about 30 days.

Tex., Dallas.—Butler Bros. will erect 8-story addition to building; frontage 340 ft.; 200,000 ft. additional floor space; approximate cost \$350,000. A. M. Mason, Local Mgr.

Tex., El Paso.—W. F. Renshaw & Co. will expend \$4000 to complete second story of building at 310 S. El Paso St.

Tex., El Paso.—White House Shoe Store, M. Gohlentz, Prest., is having plans prepared by Trost & Trost, Mills Bldg., El Paso, for 2 additional stories; cost \$60,000; construction begins Jan. 1. (Lately noted.)

Tex., Fort Worth.—J. M. Vincent will erect reinforced concrete business building; 2 or 3 stories; cost \$50,000.

Tex., Goliad.—Joseph Wearden will erect brick store building.

Va., Wytheville.—I. O. O. F. will erect building to contain stores, etc. (See Association and Fraternal.)

W. Va., Bluefield.—M. K. Harman will erect 2-story brick building; cost \$5000.

THEATERS

D. C., Washington.—Willard Theater Co. is being organized by Geo. M. Mann, 2836 27th St. N. W.; A. T. Babcock and C. M. Casey to erect theater on 13th St. between E and F Sts.; seating capacity 2300; main corridor to extend about 100 ft. to main foyers of both parquet and balcony floors; investment about \$400,000.

Fla., Live Oak.—H. W. Taylor will erect opera-house; brick; 50x100 ft.; L. T. Morgan, Archt., Live Oak.

Ga., Atlanta.—G. W. McClure plans to erect theater at 15 Houston St.

La., Lake Charles.—Southern Amusement Co. acquired building on Ryan St. for \$25,500 and will remodel for Lyric Theater; install front, provide seating capacity of 1000; install typhoon fans for ventilation, etc.; investment \$40,000; also install typhoon fans in Arcade Theater.

Md., Baltimore.—Columbia Amusement Co., Samuel A. Scribner, Gen. Mgr., Broadway and 42d St., New York, plans to improve Palace Theater; Thos. R. Henry, temporary local manager.

Mo., Kansas City.—George E. Bowling and J. D. Buffon will erect 2 buildings to be leased to Kansas City Feature Film Co.; 3-story office building in front; 50x70 ft.; concrete film-shipping room 40x50 ft. in rear; will also contain miniature theater; auditorium to seat 100; 5 fireproof vaults; cost \$50,000; completion about April 1.

Tex., Seymour.—A. J. Cooper will erect picture theater; 40x100 ft.; interlocking tile and stucco finish; composition roof; wood floors; cost \$7000.

WAREHOUSES

Ark., Pine Bluff.—Fox Bros. Hardware Co., Fred. Fox, Prest., will erect warehouse; 100x114 ft.; 4 stories; probably fireproof. (Lately noted.)

Mo., Kansas City.—Montgomery Ward & Co., main office, Chicago, is reported to erect addition to building; present structure "U" shaped; addition to consist of 3 units on each side; construction begins immediately on 1 unit on each side, each 162 ft. long; initial cost \$750,000.

N. C., Winston-Salem.—Chatham Manufacturing Co., Winston-Salem and Elkin, N. C., will erect storage house; 2 stories; gravel roof; brick; 90x100 ft.; cost \$5000; day labor.

N. C., Winston-Salem.—Liberty Storage Co. organized with \$250,000; E. D. Vaughn, Prest.; H. A. Pfohl, V. P.; C. D. Cromer, Secy.-Treas.; acquired Salem Iron Works plant and grounds; will erect five 3-story buildings, etc.

S. C., Spartanburg.—Laurence P. Sims will erect store and warehouse buildings. (See Stores.)

Tex., El Paso.—Jolly & Morris will erect warehouse; cost \$25,000.

Tex., Fort Worth.—C. A. O'Keefe has plans by Sanguinet & Staats, Fort Worth, for storage warehouse for Binyon-O'Keefe Fireproof Storage Co.; 100x150 ft.; 6 stories; reinforced concrete; asphalt roof, with graveled finish; waxed concrete floors; steam heat (for office only); 150 rooms with steel doors; automatic sprinkler system; cost \$90,000; bids opened Dec. 20; construction begins Jan. 1. Address architects. (Lately noted.)

Tex., San Antonio.—Breden-Runge Co., Cuero, Tex., will erect warehouse; cost \$30,000.

W. Va., Wheeling.—Valley Star Store Co. will erect warehouse; cost \$3500.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Ga., Atlanta.—Mrs. B. H. Barr let contract to M. G. Morris, Atlanta, to erect 2-story brick-veneer apartment-house; cost \$12,000. (Lately noted.)

Va., Pulaski.—G. C. Hall let contract to J. Foy Hall to erect apartment-house; each apartment to have 5 rooms.

ASSOCIATION AND FRATERNAL

La., New Orleans.—Fraternal Home Assn. let contract to Arthur P. Boh, New Orleans, to erect addition to lodge building for Loyal Order of Moose, for auditorium and gymna-

slum; plans by H. Jordan Mackenzie, 827 Gravier St., New Orleans, call for 53x128 ft.; fireproof; built-up roof; reinforced concrete floors; steam heat; city lighting; cost \$150,000. (Lately noted.)

Tex., Austin.—Austin Lodge No. 361, B. P. O. E., let contracts to H. E. Wattlinger, John L. Martin and W. Twining, all of Austin, to install gymnasium, bowling alleys, shower baths, etc., in lodge building; cost \$4000. (Lately noted.)

BANK AND OFFICE

Ga., Atlanta.—Atlanta Mortgage & Savings Co. let contract to C. Shelverton, Atlanta,

to erect office building; 20x54 ft.; 3 stories; brick; tar and gravel roof; wood floors; steam heat; electric lights; cost \$10,150. (Lately noted under Stores.)

N. C., Winston-Salem.—Auditorium Co. let contract to erect office, theater and store building. (See Theaters.)

Okl., Ardmore.—B. A. Simpson let contract to erect store and office building. (See Stores.)

Tex., Rockspings.—Charles Schreiner, Kerrville, Tex., let contract to Bruno Schott, Kerrville, to erect 1-story brick bank building. (Lately noted.)

CHURCHES

Okl., Oklahoma City.—Second United Presbyterian Church, Rev. E. B. Ringland, pastor, 1523 E. 9th St., will erect building; 45x60 ft.; let contract to E. L. Lileym, 312 Insurance Bldg., Oklahoma City; Hawk & Parr, Architects, 501 Security Bldg., Oklahoma City. (Lately noted.)

S. C., Jonesville.—Baptist Church let contract to Bud Bishop, Inman, Ky., to erect brick-veneer building; cost \$6100, exclusive of fixtures. (Lately noted.)

CITY AND COUNTY

Mo., St. Louis.—Children's Building, etc.—Dept. of Prest., Board of Public Service, let contract to Wm. MacDonald, 428 Odd Fellows Bldg., St. Louis, to erect children's building, juvenile court and house of detention at 14th St. and Clark Ave.; cost \$35,000. Address contractor. (Lately noted.)

Okl., Collinsville.—Library.—City let contract to erect Carnegie Library. Address The Mayor.

COURTHOUSES

Tex., Farwell.—Parmer County Commrs. let contract on percentage basis to W. M. Rice, Amarillo, to erect courthouse; reinforced concrete; fireproof; pitch and gravel roof; hot-water heat; electric lights; cost about \$55,000; Smith & Townes, Architects, Grand Theater Bldg., Amarillo, Tex. (Previously noted.)

DWELLINGS

Ark., Mulberry.—Dix Hamm has plans by and let contract to J. R. Blye, Mulberry, to erect frame dwelling; 48x48 ft.; shingle roof; wood floors; electric lights; cost about \$4000.

Ark., Newport.—James Dogherly let contract to W. H. Snetser to erect residence.

Fla., Belleair.—Harold Lee Judd let contract to G. A. Miller, Tampa, to erect residence.

Ga., Savannah.—Ford P. Fuller, Zickgraf Lumber Co., American Bank Bldg., let contract to Spaulding Construction Co., Provident Bldg., Savannah, to erect residence; 6 rooms; stucco on brick; slate roof; frame floors; electric lighting system, with concealed knob and tube; E. Lynn Drummond, Archt., Rowland Bldg., Savannah. Address contractor. (Lately noted.)

Ga., Savannah.—Leopold Adler has plans by Levy & Clarke, Germania Bldg., and let contract to A. A. Artley, both of Savannah, to remodel and erect addition to residence, to include colonial porch 50 ft., columns 25 ft., 2 stories high; provide sleeping porch on second story; cement walks around 3 sides of property; garage, etc.

La., New Orleans.—Gentilly Terrace Co. let sub-contracts for 2 bungalows on Music St.; cost \$7000 each.

Md., Baltimore.—Adele Meade let contract to Winkler & Otto to erect semi-bungalow on Harford Rd., north of Parkview Ter.; frame; 32x38 ft.; cost \$3697; Arthur Towne, Archt., 708 Linwood Ave., Baltimore.

Md., Baltimore.—Leon Braglin has plans by Stanislaus Russell, 2900 Clifton Ave., and let contract to Randolph Forrester, 2019 W. North Ave., both of Baltimore, to erect three 2-story brick dwellings at Clifton and Dukeland Aves.; two to be 22x34 ft.; one, 21x34 ft.; cost \$6000.

Md., Catonsville.—A. C. Milley let contract to L. E. Gerwig & Co., 1028 N. Fulton Ave., Baltimore, to erect residence at Ten Hills; cottage type; frame; 2½ stories; cost \$6000.

Miss., Corinth.—M. L. Hamlin has plans by and let contract to James Taylor, Corinth, to erect residence; 36x46 ft.; frame; brick foundation; tin shingle roof; wood floors; open grates; cost \$7200; electric lights; concrete walks. (Lately noted.)

Mo., Kansas City.—O. Q. Wahrenbrock, 3930 Harrison St., let contract to C. E. Closser, 24th and Mersington Sts., Kansas City, to erect residence; 24x33 ft.; brick veneer;

shingle roof; double oak floors; cost \$3500; hot-water heat, \$500; plans by owner. (Lately noted.)

N. C., Greensboro.—W. H. Matthews let contract to J. W. E. Lewis, Greensboro, to erect two 5-room bungalows and improve bungalow on Church St.; wood; juniper shingle roof; heating not decided; wood floors; electric lights; cost \$6000. Address contractor. (Lately noted.)

N. C., Winston-Salem.—Mrs. T. V. Edmunds let contract to L. T. Long, Winston-Salem, to erect 8-room residence; cost about \$3000.

N. C., Winston-Salem.—R. J. Reynolds let contract to Smith & Hauser, Winston-Salem, to erect 11 tenement-houses.

S. C., Spartanburg.—J. A. Childs, Wofford College, let contract to J. M. Crawford, Spartanburg, to erect 7-room residence on Hampton Drive.

Tex., Waco.—R. T. Dennis let contract to T. B. Barton, Waco, to erect residence to replace structure lately noted damaged by fire; 12 rooms; cost \$5000; Milton W. Scott, Archt., Waco.

Va., Richmond.—Roland Park Corp. let contract to R. M. Anderson & Co., Richmond, to erect two 2-story frame and stucco dwellings; cost \$6000. (Lately noted.)

Va., Richmond.—J. Kerr Branch let contract to Wm. P. Lipscomb & Co., 1405 F St. N. W., Washington, D. C., to erect residence; brick and stone; John Russell Pope, Archt., 527 5th Ave., New York. (Lately noted.)

N. C., Raleigh.—G. H. Andrews has plans by Jas. A. Sauter, Raleigh, for residence at 301 N. Blount St.; brick; cost \$22,000; Ford Bros. Contrs., Raleigh. (Lately noted.)

N. C., Raleigh.—W. W. Vass let contract to J. W. Coffey, Raleigh, to remodel residence; cost \$4700; J. A. Salter, Archt., Raleigh.

Tex., El Paso.—W. B. Latta has plans by Brauntun & Leibert, Two-Republics Life Bldg., El Paso, and let contract to Beaudett & Cropper, also of El Paso, to erect 2-story 9-room residence; cost \$10,000 to \$11,000.

GOVERNMENT AND STATE

Miss., Gulfport.—Exposition.—Mississippi Centennial Exposition Commission let contract to Carroll Blake Construction Co., Birmingham, Ala., to erect lately-noted auditorium; 60x158 ft.; 2 stories; steel and tile; composition roof; concrete and wood floors; cost \$44,000; N. W. Overstreet, Archt., Jackson, Miss.; also let contract to Hancock & McArthur, Meridian, Miss., to erect exhibit building; 80x284 ft.; hollow tile and stucco; Barrett specification and tile roof; cement floors; gas steam heat; electric lights; cost \$40,000; P. J. Krouse, Archt., Meridian.

Tex., Yoakum.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., let contract at \$44,135 to Algernon Blair, Montgomery, Ala., to erect postoffice; completion in 12 months. (Lately noted.)

Va., Franklin.—Post Office.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., let contract at \$37,740 to Robert V. Richardson, Hampton, Va., to erect postoffice; 68x75 ft.; fireproof; slate and composition roof; reinforced concrete floors; hot-water heat; electric lights; cement sidewalks. Address Contr. (Lately noted.)

Va., Portsmouth.—Student Officers' Quarters.—Bureau of Yards and Docks, Navy Dept., Washington, D. C., F. R. Harris, Chief of Bureau, let contract at \$42,120 to John H. Nolan Construction Co., Munsey Bldg., Washington, to erect student officers' quarters; 3 stories; brick; reinforced concrete footings, columns, beams and floors; plastered hollow terra cotta tile (or gypsum block) partitions; wood roof framing, covered with slate. (Lately noted.)

Va., Richmond.—Offices.—State let following contracts to remodel Davis residence for offices: Carle Boehling Co. for plumbing; Bowman & Gregory, heating; W. H. Jenks, electrical work; all contractors of Richmond; Carneal & Johnston, Architects, Richmond. (Lately noted.)

HOSPITALS, SANITARIUMS, ETC.

Ky., Louisville.—Deaconess Home and Hospital let contract to General Construction Co., Inter-Southern Bldg., Louisville, to erect hospital; 50x65 ft.; 3 stories; fireproof; concrete; gravel roof; concrete floors; steam heat; electric lights; cost \$30,000; H. J. Scheirich, Archt., Louisville. Address contractor. (Lately noted.)

HOTELS

Ark., Warren.—P. W. and F. B. Coker have plans by and let contract to C. D. Nichols, Warren, to erect hotel; 36x100 ft.; 2 stories; paper roof; wood floors; sidewalk; cost \$8000. Address Coker Hotel. (Lately noted.)

D. C., Washington.—National Capitol Hotel Co. let contract to Nelson & Lewin, Chicago, to erect hotel at Pennsylvania Ave., 15th and F Sts.; 10 stories, basement, sub-basement and roof garden; reinforced concrete; tile roof; concrete floors; vapor heat; 2 to 1 overhead traction electric elevators; cost \$1,000,000; Carrere & Hastings, Architects, 45th St. and Vanderbilt Ave., New York; J. Ellis Powell, Consult. Engr., Union Trust Bldg., Washington. (Lately noted.)

Mo., St. Joseph.—Buchanan Hotel let contract to Lawhon Stamey Construction Co., 212 N. 7th St., St. Joseph, to erect addition to building; 85x25 ft.; fireproof; tar and gravel roof; cost \$75,000; Walter Boschen, Archt., St. Joseph. (Noted in August.)

SCHOOLS

Fla., Gonzalez.—Special School Dist. No. 5 let contract to S. F. Fulghum & Co., Pensacola, Fla., to erect lately-noted agricultural high school; 106x56 ft.; brick; composition roof; wood floors; steam heat; electric lights; cost \$18,000; Walker D. Willis, Archt., Pensacola. Address R. P. Wilder, Gonzalez. (See Machinery Wanted—School Equipment.)

Ga., Scott.—Trustees let contract to E. F. Pope & Bro., Fitzgerald, Ga., to furnish material and erect school. (See Machinery Wanted—School Desks.)

Md., Eastport.—See Md., Fairfield.

Md., Fairfield.—Anne Arundel County Commissioners, Annapolis, Md., let contracts to erect colored schools at Fairfield and Eastport; cost \$7000.

Md., Glenburnie.—Board of Education of Anne Arundel County, Annapolis, Md., let contract to Edward Woodfall, Glenburnie, to erect school; 100x48 ft.; brick; slate roof; double wood floors; cost \$6000; steam heat, about \$800; Herbert G. Crisp, Archt., 2709 St. Paul St., Baltimore. (Previously noted.)

Miss., Jackson.—Hinds County Suprvs. let following contracts to erect agricultural high school: W. J. McGee, Jackson, at \$18,553 to erect main building and \$1950 for power plant; A. L. Dickson, Jackson, at \$16,443 and \$14,677 to erect dormitories; completion by July 1. (Lately noted.)

Mo., Kansas City.—Kansas City Conservatory of Music let contract to Martin Carroll Co., 1118 McGee St., Kansas City, to erect building at 1515 Linwood Blvd.; 41x100x35 ft.; brick and steel; composition roof; concrete and wood floors; electric lights; concrete sidewalks; cost \$16,000; vacuum steam heat, \$2150; Carl Boller, Archt., Gayety Theater Bldg., Kansas City.

Tex., College Station.—Agricultural and Mechanical College, W. B. Bizzell, Prest., let contract to Ledbetter & Greathouse, Austin, Tex., to erect auditorium building, 93x180 ft., to cost \$90,000, and agricultural experiment station, 62x122 ft., to cost \$74,000; both structures fireproof; brick and architectural ferro-cotta; composition roof; cement floors; heating and lighting from central station; freight elevator in experiment station building; Endress & Watkins, Architects, Houston. (Lately noted.)

STORES

Ga., Atlanta.—J. S. Gaines let contract to T. M. York, Atlanta, to erect 1-story brick building; also remodel building in rear; cost \$5000.

La., Lake Charles.—Mrs. Corry let contract to P. Oliver & Son, Lake Charles, to erect store building; 25x30 ft.; 1 story; fireproof; brick; Barrett roof; concrete floors; E. W. Phillips, Archt., Lake Charles. (Lately noted.)

La., Lake Charles.—H. Moss let contract to P. Oliver & Son, Lake Charles, to erect store building; 30x52 ft.; fireproof; brick; Barrett roof; concrete floors; A. H. Humphrey, Archt., Lake Charles. (Lately noted.)

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Agricultural Machinery.—Jose de la Quintana, Jerez de la Frontera, Spain, writes to Manufacturers Record: I wish to find some firm of your country which builds harvesting and threshing machinery combined together in one. Holt Mfg. Co., Stockton, Cal., and Best Mfg. Co., San Leandro,

Mo., Joplin.—H. C. Murphy and W. J. Letfen let contract to Deiter & Wenzel, Joplin, to erect business building; 50x90 ft.; fireproof; brick and cement; cement roof and floors; electric lights; cost \$3000; A. C. Michalis, Archt., Joplin. (Lately noted.)

Mo., Webb City.—S. H. Kress & Co., 220 Broadway, New York, let contract to McDougal & Elliott, Joplin, Mo., to erect store building; 2 stories; 43x100 ft.; brick; cost \$25,000 to \$30,000; completion in 4 months; J. C. Harrison, Local Mgr.; S. Burrell, Archt., 350 Broadway, New York. (Lately noted.)

N. C., Winston-Salem.—Auditorium Co. let contract to erect store, theater and office building. (See Theaters.)

Okl., Ardmore.—B. A. Simpson let contract to Russell-Brown Co., Houston and Dallas, Tex., to erect 6-story store and office building; 75x200 ft.; reported cost \$300,000.

Okl., Oklahoma City.—Jos. Myer and Sidney Brock let contract to Reinhart & Donovan, Oklahoma City, to erect store building; 75x140 ft.; reinforced concrete; composition roof; cement floors; steam heat; electric lights; cost \$45,000; Leonard H. Bailey, Archt., 616 Colcord Bldg., Oklahoma City.

Tex., Beaumont.—E. L. Wilson Hardware Co. let contract to erect store and warehouse. (See Warehouses.)

Tex., Mineral Springs.—Dr. J. W. Crutcher let contract to erect 2-story brick building on East Coke St.

Tex., San Antonio.—R. T. Prullitt, 1102 W. Commerce St., let contract to C. E. Reel, San Antonio, to erect store building; 112x75 ft.; concrete, tile and brick; Bird roofing; basement 23x75 ft.; cement; heat from base burners; city lighting; Otis handpower elevator; Wm. Simpson, Engr.; R. L. Pierce, Archt., San Antonio; construction begins Jan. 1. (Lately noted.)

THEATERS

D. C., Washington.—Knickerbocker Theater Co., 3520 16th St., let contract to F. L. Wagner, 1413 H St. N. W., Washington, to erect auditorium at 18th St. and Columbia Rd.; 4 stories; reinforced concrete; stone-trimmed brick front; marquis over main entrance; seating capacity 1800 people; cost \$80,000.

N. C., Winston-Salem.—Auditorium Co. let contract to Travers-Wood Co., Richmond, Va., to erect theater, store and office building; 60x150 ft.; 75 ft. high; reinforced concrete; fireproof; slag roof; reinforced concrete floors; standard theater heating and ventilating system; lighting undecided; cost \$75,000; Northrup & O'Brien, Architects, Winston-Salem. Address contractor. (Lately noted.)

WAREHOUSES

Okl., Oklahoma City.—Oklahoma City Mill & Elevator Co. let contract to Burrell Engineering & Construction Co., Chicago, to erect 9 concrete tanks for grain storage; 18 ft. 6 in. in diameter; 36 ft. high; reinforced concrete construction, roof and floors; cost \$35,000; completion Jan. 15. (Lately noted.)

Tenn., Memphis.—George H. Guthrie is reported to have contract to erect warehouse for Rosa Lee; 2 stories; brick; cost \$4000.

Tex., Beaumont.—E. L. Wilson Hardware Co. let contract to J. S. Meriwether, Beaumont, to erect warehouse and store building; 99x306x113 ft.; brick and reinforced concrete; concrete roof and floors; city electric lights; cost \$70,000; Babin & Beck, Architects, Beaumont. (Lately noted.)

Tex., El Paso.—Worsham, Palm & Singleton let contract to H. T. Ponsford, El Paso, to erect warehouse; 210x290 ft.; 1 story and basement; brick and concrete; cost \$40,000 to \$50,000; Brauntun & Leibert, Architects, Two-Republics Life Bldg., El Paso. (Lately noted.)

Va., Richmond.—W. H. Harris Grocery Co. let contract to Travers-Wood Co., Richmond, to erect warehouse; 6 stories; reinforced concrete; 80x134 ft.; Barrett specification roof; Kuhns cantilever slab floor construction; 2 freight elevators; cost \$70,000; Carneal & Johnston, Architects, Richmond.

and W. J. Let
nel, Joplin,
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Art Glass Windows.—J. D. Barnes, Chrmn. Building Com., First Baptist Church, Cleveland, Tenn.—Prices on art glass windows for \$30,000 church.

Automobile Manufacturing Equip-ment.—Piedmont Motor Car Co., 602 Krise Bldg., Lynchburg, Va.—Now receiving bids on automobile manufacturing machinery and first installment for assembling.

Barrels.—R. J. Monson, Monaskon, Va.—20 second-hand sugar barrels; good condition; heading in one end; state price and all details in first letter.

Boilers.—Atlantic Manufacturing Co., Wil-
mington, Del.—Second-hand 150 H. P. boiler.

Boiler.—R. C. Bazemore, Windsor, N. C.—Horizontal boiler, not less than 80 H. P. or over 100 H. P., second-hand, good condition, with guarantee. Name price.

Boilers.—See Mining Plant Equipment.—Penland Clay Co.

Boilers.—L. F. Hobbs, P. O. Box 483, Nor-
folk, Va.—75 to 100 H. P. vertical boilers;
100 to 125 lbs. steam.

Box Machinery.—J. W. Jackson, City
National Bank Bldg., Sumter, S. C.—Data
and prices on machinery for box factory.

Box Machinery.—See Veneer and Box
Machinery.—Queen City Box Co.

Bricks.—Yount Cotton Mills, Newton, N.
C.—800,000 bricks; delivery to begin March 1.

Bridge Construction.—Coosa County
Comms., Rockford, Ala.—Bids until Dec. 11
to construct two 40-ft. clear span reinforced
concrete bridges on turnpike south of Rock-
ford, across Rockford and Hatchmadegeed
Creeks; also 20-ft. clear span reinforced con-
crete bridge on Nixburg and Equality Rd.
near Equality; plans and specifications to
accompany each bid; Lofton Thomas, Judge
of Probate.

Bridge Construction.—See Road and
Bridge Construction, Manatee County Com-
missioners, Bradenton, Fla.

Bridge Construction.—Whitley County,
B. F. Rose, County Judge, Williamsburg,
Ky.—To let contract in Jan. to erect a
300-ft. span and a 100-ft. span bridge.

Bridge Construction.—Montgomery
County Bridge Comms. (A. J. Plemons,
Commr.) and County Judge J. R. Kelly,
Mt. Ida, Ark.—To let contract Dec. 29 to
build 4 bridges—one across Ouachita River,
2 spans 110 ft. long, on three 32-ft. high
piers; one across Ouachita River, 2 mi. from
Washita, 1 steel span 200 ft. long on two
36-ft. piers; one across North Fork 3 mi.
from Buckville, 1 steel span 140 ft. long on
two 22-ft. high piers; one across Caddo
River near Caddo Gap, 1 steel span 140 ft.
long on 2 piers, 22 ft. high; plans and specifi-
cations at office of County Clerk, Mt. Ida.

Building Materials.—Rev. J. William
Boyer, Pastor, First Presbyterian Church,
Conway, Ark.—Prices on building materials
for \$2500 manse.

Building Materials.—Ellerbe Knitting
Mills, J. R. Bennett, Secy., Ellerbe, N. C.—
Prices on building materials for proposed mill.

Building Materials.—Carroll Blake
Construction Co., Birmingham, Ala.—Prices
on building material for \$44,000 auditorium
at Gulfport, Miss.

Cans (Oil, Enamelled).—See Cast-Iron
Heating Device Manufacture.—Solar Oil
Heating Co.

Canning Machinery.—Francis M. Sut-
ton & Co., 17 Battery Pl., New York.—Data,
prices, descriptions, etc., on small outfits
for canning fruits, syrup and jams; for ship-
ment to Africa.

Canning Machinery.—Wilson Commis-
sion & Warehouse Co., Wilson, N. C.—Esti-
mates on equipment to can fruits and
vegetables in Nos. 1, 2 and 3 tins.

Cars (Mine).—See Mining Plant Equip-
ment.—Sunset Mining Co.

Cars (Dump).—See Mining Plant Equip-
ment.—Penland Clay Co.

**Cast-Iron Heating Device Manufac-
ture.**—Solar Oil Heating Co., 622 Equity
Bldg., Muskogee, Okla.—Prices on manufac-
ture of heating device, of cast iron, with in-
ternal chamber, weight 5 lbs. Give estimate
on 100 and 500 lots; also prices on following:
3-gal. enamelled cans for oil, in lots of 100, 500
and 1000; sensitive needle valve for each de-
vice; prices wanted on heaters with device
attached.

**Cider and Apple Butter Machinery,
etc.**—Virginia Fruit Product Co., Louis A.
Schols, Gen. Mgr., Roanoke, Va.—Prices on
equipment of machinery to handle apples
and their products—cider, apple butter and

jam—also other fruits; and to ferment and
distill residue into denatured alcohol.

Cotton Cloth.—F. H. Potter, 1241 W. 47th
St., Norfolk, Va.—To correspond with manu-
facturers of extra wide sheeting, 12 ft. wide
or more.

Crane Chalus, Rivets, Drills, etc.—
Panama Canal, Earl I. Brown, Gen. Purchas-
ing Officer, Washington, D. C.—Bids until
Jan. 2 to furnish crane chain, rivets, drills,
tram nails, dies, chisels, cutters, saws, water
gauges, lamps, grease cups, electric hair
drier, daubers, ignition cable, automobile
tires, tender hose, paints, graphite, am-
monia, turpentine substitute, sulphur, etc.;
blanks and general information relating to
this circular (No. 1107) may be obtained
from this office or offices of assistant pur-
chasing agents, 21 State St., New York; 614
Whitney-Central Bldg., New Orleans, and
Fort Mason, San Francisco; also from U. S.
Engr. offices in Seattle, Los Angeles, Balti-
more, Philadelphia, Pittsburgh, Boston, Buf-
falo, Cleveland, Cincinnati, Chicago, St.
Louis, Detroit, Milwaukee, St. Paul, Chatta-
nooga, Louisville, Mobile and Galveston;
Commercial Club, Kansas City, Mo.; Cham-
ber of Commerce, Quincy, Ill., and Commer-
cial Club, Tacoma, Wash.

**Distilling (Denatured Alcohol)
Machinery.**—See Cider and Apple Butter
Machinery, etc.—Virginia Fruit Product Co.

Dredging, etc.—Jackson County Maple
Slough Drainage Dist., W. R. Harvey,
Chrmn., Newport, Ark.—Bids at office of
Hillhouse & Boyce until Dec. 29 to construct
following: 413,873 cu. yds. dredge ditch ex-
cavation, 64,859 cu. yds. scraper ditch ex-
cavation, 2000 lin. ft. 24-in. drain tile, 300 lin.
ft. concrete drain tile and 20 wooden trusses
and stringer bridges; bids received upon 4
separate contracts and upon whole work;
plans and specification on file with W. A.
Bowman, Engr., Newport, and with Ferd.
Tonney, Secy. of Dist., Swifton, Ark.

Drill (Churn).—See Mining Machinery.—
Everton Mining & Development Co.

Electrical Equipment.—Rev. J. Wil-
liam Boyer, Pastor, First Presbyterian
Church, Conway, Ark.—Prices on electrical
equipment for \$2500 manse.

Electric-Light Equipment.—W. T.
Ball, Comanche, Tex.—Data and prices on
supplies and material for 25 K. W. plant;
wire, poles, etc., for street lighting; trans-
formers, etc., and inside fixtures.

Electric Motor.—Thos. Connor & Sons,
Bank and Trust Bldg., Greensburg, Pa.—
Prices on 150 H. P., A. C., 3 phase, 60 cycle,
220-440 or 2200 volts slip ring motor, with
21x24 in. pulley.

Electric Supplies.—J. D. Barnes,
Chrmn. Building Com., First Baptist
Church, Cleveland, Tenn.—Prices on electric
supplies for \$30,000 church.

Electrical Machinery.—Yount Cotton
Mills, Newton, N. C.—Frame driven electric
system, including 300 H. P. generator, for
8168 spindle mill.

Electrical Machinery.—See Mining
Plant Equipment.—Penland Clay Co.

Electric Motor.—John G. Duncan Co.,
308 W. Jackson Ave., Knoxville, Tenn.—
Dealer's price, for quick delivery, on 1/2 to 3/4
H. P. 60-cycle 3-phase or direct-connected
motor; second-hand.

Elevators.—Laurence P. Sims, Spartan-
burg, S. C.—Prices on hand or electric ele-
vators for store and warehouse buildings.

Elevator (Electric, Passenger).—
Child's Specialty House, Union City, Tenn.—
Prices on electric passenger elevator; could
use good second-hand.

Engine.—Atlantic Manufacturing Co.,
Wilmington, Del.—Second-hand Corliss en-
gine, about 100 H. P.

Engines.—See Mining Plant Equipment.—
Penland Clay Co.

Engine (Hoisting).—Chas. J. Geobegan,
Birmingham, Ala.—One 500 to 700 H. P.
hoisting engine, with 2 friction drums about
7 ft. diam. to hold 7000 ft. 1 1/2-in. rope; en-
gine equipped with link motion. Give mak-
er's name, condition and price.

Engines (Oil).—See Mining Machinery.—
Everton Mining & Development Co.

Excavation.—Comms. Crittenden
County Drainage Dist. No. 3 (D. B. Wool-
lard and others), Marion, Ark.—Bids until
Dec. 18 to construct 2,000,000 cu. yds. ex-
cavation; blue prints and specifications fur-
nished by Ferree & McClekey, Engrs.,
Memphis, Tenn.

Excelsior Machinery.—W. M. Shan-
non, 1115 Barnwell St., Columbia, S. C.—
Data, catalogues and prices on equipment
for excelsior plant.

Feed Mills.—H. C. Middleton, 412 Leon-
ard Bldg., Augusta, Ga.—Addresses of manu-
facturers of machinery to grind and mix
stock feed.

Fire Hose.—Dist. Comms., Room 509,
Dist Bldg., Washington, D. C.—Bids until
Dec. 18 to furnish and deliver 5000 ft. of 2 1/2-
in. cotton-covered rubber-lined fire hose;
specifications and proposal forms obtain-
able from Purchasing Officer, Room 320,
Dist Bldg.

Fuse Materials and Machinery.—
Beard-Qualls Co., Carthage, Mo.—Data, cata-
logues and prices on machinery, equipment
and raw material for manufacture of fuses
for igniting explosives.

Grading.—Dist. Comms., Washington,
D. C.—Bids until Dec. 21 to grade streets
and alleys, aggregating 9200 cu. yds.; pro-
posal forms, specifications and information
from Chief Clerk, Engr. Dept., Room 427,
Dist Bldg.

Hardware.—Louis G. Hester, 529 First
National Bank Bldg., Houston, Tex.—Cata-
logues and prices on elevator sliding door
hardware.

Heating Plant.—J. H. Curtis Auto-Ex-
change, Carmen, Okla.—Proposals on steam
heating plant for automobile sales building.

Heating Plant.—J. D. Barnes, Chrmn.
Building Com., First Baptist Church, Cleve-
land, Tenn.—Prices on furnaces for \$30,000
church.

Heating System.—M. Mortenson, Fair-
fax, Okla.—Steam-heating system.

Hoist.—See Mining Plant Equipment.—
Sunset Mining Co.

Hoists.—See Mining Plant Equipment.—
Penland Clay Co.

Hoist.—John G. Duncan Co., 308 W. Jack-
son Ave., Knoxville, Tenn.—Dealers' prices
on good second-hand single friction drum,
6 to 7 ft. diam., with flanges and width of
face suitable for winding at least 3000 ft.
of 1-in. cable and strong enough to lift
10,000 lbs. on single line vertical lift; hoist
operated with 150 to 200 H. P., 3 phase, 60
cycle, 2200 volt, slip-ring motor; if cannot
find that, possibly use a steam-driven hoist
doing away with engine gear, making thus
not counter-shaft.

Ice Factory Supplies.—W. B. McNair,
McColl, S. C.—Addresses of manufacturers
of ice factory supplies.

Incinerator.—E. D. Bass, Commr. of
Streets and Sewers, Municipal Bldg., Chatta-
nooga, Tenn.—Bids until Jan. 2 to construct
garbage incinerator; bids to be accompanied
by plans, specifications and full informa-
tion; further information on application.

Iron Bars.—See Tools, etc.—Silva Gouvea.

Knitting Machinery.—Ellerbe Knit-
ting Mills, J. R. Bennett, Secy., Ellerbe,
N. C.—Prices on equipment for knitting
mills.

Knitting Needle Machinery.—E. B.
Gresham, Box 253, Hendersonville, N. C.—
Data and prices on machinery to manufac-
ture knitting needles.

Lathe (Gauge), etc.—Ahsokle Building
Supply Co., Ahsokle, N. C.—Back-knife gauge
lathe; open 40 or 42 in.; 6-in. and iron; also
double surfacer of light weight, 6-in. x 20-in.
or 24 in.; new, or good condition second-hand.

Locomotives.—See Sawmill Equipment,
etc.—American Pine & Cypress Co.

Logging Equipment.—See Sawmill
Equipment, etc.—American Pine & Cypress
Co.

Machine Shop Equipment.—M. Mor-
tenson, Fairfax, Okla.—Shop equipment for
garage.

Machine Tools, etc.—Navy Dept., Bu-
reau Supplies and Accounts, Washington,
D. C.—Bids on electric overhead crane,
Schedule 501, delivery Boston; 24-in. bench
drill, double emery grinder and screw cut-
ting engine lathe, Schedule 492, delivery
Norfolk; upright press drill, double emery
grinder, screw cutting engine lathe, column
shaper, Schedule 493; die sinking machine,
Schedule 494; and hobbing machine, Sched-
ule 502, delivery Boston; indicator system,
etc., Schedule 490, delivery Brooklyn.

Manufactured Products.—O. Wyld
Oppina & Co., 8a Av. Sur, No. 4n, Guatemala,
C. A.—To represent manufacturers and
buyers throughout Central and South
America

Manufactured Products.—Cruxent &
Olmo, P. O. Box 40, San Jose de Costa Rica,
C. A.—To represent producers and manu-
facturers in general, particularly for prod-
ucts within the branch of textiles and
novelties in every form.

Mattress Machinery.—Harry Swindell,
Belhaven, N. C.—Data and prices on machin-

ery to manufacture mattresses of corn
shucks, with cotton tops.

Mining Machinery.—Everton Mining &
Development Co., Albert C. Speirs, Mgr.,
Everton, Ark.—Prices on mining machinery
(zinc and carbonate mills); oil engines;
2-ton truck with hydraulic hoist; churn
drill; machinery oils; fuel oil.

Mining Plant Equipment.—Penland
Clay Co., Penland, N. C.—Mining equipment,
to include clay-washing machinery, dynamos,
tubular boilers and engines, hoisting out-
fits, dump cars and second-hand steel rails.

Mining Plant Equipment.—Sunset
Mining Co., J. M. McVey, Secy., Mount Hope,
W. Va.—Mining Equipment, to include elec-
tric, steam or gasoline hoist, rails, mine
cars, etc.; second-hand will do.

**Model (or Pattern) Making Ma-
chinery and Materials.**—Ernest Simandl,
Steinauer, Nebr.—Catalogs and prices on
machinery for shop to build models of all
sizes, classes and materials; also on mate-
rials and parts, including screws, wires,
bolts, etc.

Needle Machinery, etc.—Parikh
Friends & Co., Mandvi's St., Ahmedabad,
India.—To import plant of machinery for
manufacturing steel and iron needles of
various sizes and types for hand and ma-
chine sewing as also complete plant of ma-
chinery for making milk sugar from sepa-
rate milk after casien is taken out, and in
the export of Indian products such as
casien, ivory chips, various oils, various
seeds and corns, etc.

Oils.—See Needle Machinery, etc.—Parikh
Friends & Co.

Oils (Machinery; Fuel).—See Mining
Machinery.—Everton Mining & Development
Co.

Paving.—City of St. Petersburg, Fla., W.
J. Overman, Director Public Works.—To
open bids Dec. 22 on 8000 sq. yds. brick pav-
ing.

Paving.—City of Lakeland, Fla., John F.
Cox, Mayor.—Bids until Jan. 19 to improve
about 12 mi. streets; includes grading, curb-
ing and gutters, and 13,900 sq. yds. paving
with sheet asphalt, asphalt block or brick;
J. W. Turner, Engr., Lakeland.

Paving.—City School Board, Jas. N.
Yeager, Supt., Lake Charles, La.—Bids until
Dec. 21 to construct cement sidewalk on
east side of Blvd., between Fifth and Sev-
enth St., in front of and abutting high
school property; plans and specifications
on file with City Engr.

Paving.—Baltimore (Md.) Board of
Awards, City Hall.—Bids until Dec. 20 to
grade and pave with concrete-cement alleys
listed in private alley contracts Nos. 16 and
17; specifications and blank proposal sheets
furnished by Geo. M. Boteler, Acting High-
ways Engr., City Hall.

Paving.—Baltimore (Md.) Board of
Awards, City Hall.—Bids until Dec. 20 to
construct cement footways around city prop-
erty in various parts of city; Group No. 9;
specifications and blank proposal sheets on
application to Geo. M. Boteler, Acting High-
ways Engr., City Hall.

Paving.—Cumberland County Comms.,
Cumberland, Va.—Bids until Dec. 21 to con-
struct 42 mi. of approach to bridge over
James River at Columbia; plans and specifi-
cations on file in Clerk's office, Cumber-
land, and with State Highway Commission,
G. P. Coleman, State Highway Commr., Rich-
mond.

Pumps (Drainage).—Louisiana Hos-
pital for Insane, Pineville, La.—Bids until
Dec. 11 to furnish drainage pumps direct
connected to fuel or kerosene oil engines
having total capacity for pumping 25,000
gals. water per minute; for specifications
and further particulars address J. N.
Thomas, M. D., Supt., Pineville.

Paving and Sewer Construction.—
City Comms., Huntington, W. Va.—Bids
until Dec. 22 to grade, curb and pave with
vitrified brick First St., from 11th to Del-
ford Ave.; also construct lateral sewers as
follows: 975 ft. 12-in. tile, 900 ft. 10-in. tile
and 445 ft. 8-in. tile; details, plans, profiles,
drawings and specifications on file with
A. B. Maupin, City Engr.; O. H. Wells,
Commr. of Streets, etc.

Plumbing Supplies.—Navy Dept., Bu-
reau Supplies and Accounts, Washington,
D. C.—Bids on plumbing supplies, Schedule
498, delivery Charleston.

Pump, etc.—Bureau of Yards and Docks,
F. R. Harris, Ch., Navy Dept., Washington,
D. C.—Bids until Dec. 26 to furnish and in-
stall motor-driven centrifugal pump, piping,
fittings, valves, hydrants, etc., for exten-
sion to high-pressure fire system at Naval

Proving Ground, Indian Head, Md.; plans and specifications on application to Bureau.
Pumps.—Rand & Robbins, Winston-Salem, N. C.—Prices on pumps. (Has dam construction contract at North Wilkesboro, N. C.)

Rail.—See Sawmill Equipment, etc.—American Pine & Cypress Co.

Rails.—See Mining Plant Equipment.—Sunset Mining Co.

Rails.—See Mining Plant Equipment.—Penland Mining Co.

Refrigerating Machine.—Treasury Dept., Supvrs. Archt.'s office, Washington, D. C.—Bids Jan. 11 for new refrigerating machine in United States postoffice and courthouse at Augusta, Ga.; copies of specifications obtainable at Archt.'s office and office of custodian, Augusta, at discretion.

Road Construction.—Lavaca County Comms., Hallettsville, Tex.—Bids until Dec. 23 to construct 10 mi. graveled road in Road Dist. No. 1.

Road Construction.—Lawrence County Board of Revenue, Moulton, Ala.—Bids until Jan. 8 to construct macadam road from Courtland, south 5 mi. on Landersville Rd.; profiles and plans on file with J. C. Kump, Judge of Probate.

Road Construction.—Wyoming County Comms., Will P. Cook, Clerk, Pineville, W. Va.—Bids until Dec. 23 to construct earth roads in 6 sections of 8, 10, 13, 17, 12 and 15 mi., respectively; work consists of grading and construction of small drainage structures; plans and specifications on file at Engr.'s office, Mullens, W. Va.

Road Construction.—Brooksville Dist. Road Board, Jno. T. McKinney, Chrmn., 1114 Peoples National Bank Bldg., Lynchburg, Va.—Bids until Dec. 16 to construct 1 mi. bituminous penetration macadam on Langhorne Rd., between Boonsboro Rd. and Carroll's Gate, Campbell County; plans and specifications on file at Clerk's office, Rustburg, and at 1114 Peoples National Bank Bldg., Lynchburg, and with State Highway Com., G. P. Coleman, State Highway Comms., Richmond, Va.; specifications obtainable from Mr. Coleman.

Road and Bridge Construction.—Manatee County Comms., Robt. H. Roesch, Clerk, Bradenton, Fla.—Bids until Jan. 8 to construct 20 mi. hardsurfaced roads, 4 bridges and such other structures as are necessary to complete roads in Englewood Special Road and Bridge Dist.; 92,000 cu. yds. excavation; 105,600 sq. yds. rock surface; 140 cu. yds. concrete in culverts; 4 concrete, steel and wood bridges, 54, 90, 108 and 230 ft. long, respectively, latter to be provided with steel swing draw, allowing clear opening of 30 ft.; bids to be received on road and bridge work separately and culverts may be included with either roads or bridges; plans and specifications on file with R. M. Cantey, Dist. Engr., Sarasota, and may be obtained for \$1 for specifications and \$5 for plans.

Road Construction.—Lafayette County Road Dist., Beat 4, J. C. Treloar and others, Commr., Oxford, Miss.—To let contract Dec. 23 to construct 13.3 mi. sand and clay road; Snowden & Hauser, Engrs., Jackson and Columbus, Miss.

Road Rollers.—Roy C. Whayne Supply Co., 318 W. Main St., Louisville, Ky.—8, 10 or 12 ton tandem rollers; first-class condition.

Roofing.—Laurence P. Sims, Spartanburg, S. C.—Prices on best grade tin and gravel roofing for store and warehouse buildings.

Safes.—See Tools, etc.—Silva Gouvea.

Sawmill Equipment.—Gress Mfg. Co., M. V. Gress, Prest., Jacksonville, Fla.—Will purchase planing mill equipment; specifications ready about Dec. 15.

Sawmill Equipment, etc.—American Pine & Cypress Co., Leland D. Cox, Prest.-Mgr., 603 Atlantic National Bank Bldg., Jacksonville, Fla.—Prices on boilers, engines, pumps, sawing and edging machinery, drying kilns, logging equipment, skidders, lighters, locomotives, 3 mi. 25 to 40 lb. trackage, logging trucks etc.; for installation near St. Marys, Ga.

School Desks.—S. P. Rice, Scott, Ga.—School desks and seats.

School Equipment.—R. P. Wilder, Gonzalez, Fla.—Prices on agricultural high school equipment.

Scoops.—Maryland Equipment & Supply Co., Equitable Bldg., Baltimore, Md.—2 to 4 dump scoops of 400 to 600 cu. yds. capacity.

Seating.—J. D. Barnes, Chrmn. Building Com., First Baptist Church, Cleveland, Tenn. Prices on pews for \$30,000 church.

Sewer Construction.—See Paving and Sewer Construction, City Comms., Huntington, W. Va.

Sewer Construction.—City of Tulsa, Okla., H. H. Wyss, City Engr.—Bids at office of City Auditor until Dec. 18 to construct sanitary sewer, including materials, connections, etc., in Sewer Dist. No. 12; plans, profiles and specifications on file with City Engr.

Steam Shovel.—Garyville Northern R. R. Co., Garyville, La.—Second-hand steam shovel; first-class condition; 2 to 2½ yd. capacity; give location in first letter.

Steel (Alloy, Forgings).—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 11,489 lbs. steel (alloy, forgings), Schedule 499, delivery Washington.

Steel Castings, etc.—Bureau, Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until Dec. 26 for delivering radio field equipment, and Dec. 27 for delivering candles, cypress, glycerin, white lead, lumber, mineral oil (kerosene), steel springs, and steel castings and forgings at Navy Yard. Apply for proposals.

Steel Drawers.—Board of Awards, Baltimore, Md.—Bids until Dec. 20 to furnish steel map drawers for city library; specifications, etc., at office Inspector of Bldgs.

Stove Manufacturers.—See Cast-Iron Heating Device Manufacture.—Solar Oil Heating Co.

Steel Hoops.—A. Schonfeld & Co., 21 Hope St., Glasgow, Scotland.—Steel hoops in ½ cwt. coils of 10 tons, ¾ in. by 26 G. S. G.; 10 tons, ¾ in. by G. S. G.; makers or holders to quote lowest prices F. O. B. New York, or any other port in direct communication with ports in United Kingdom.

Surfacer.—See Lathe (Gauge), etc.—Ahoskie Building Supply Co.

Sugar Machinery.—See Needle Machinery, etc.—Parikh Friends & Co.

Syrup Machinery.—H. C. Middleton, 413 Leonard Bldg., Augusta, Ga.—Addresses of manufacturers of syrup refining machinery.

Textiles.—See Manufactured Products.—Cruxent & Olmo.

Tools, etc.—Silva Gouvea, Ltd., Rua Victor Cordon 24, Lisbon, Portugal.—Catalogues, price lists and discounts on jute bags, tools of all kinds, sugar, iron bars, fat, corn flour, stockings, safes.

Truck.—See Mining Machinery.—Everton Mining & Development Co.

Trucks (Dry Kiln).—See Veneer and Box Machinery.—Queen City Box Co.

Tubing (Steel), etc.—Bureau, Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until Dec. 27 for delivering alcohol, candles, fire clay, air hose, white lead, lumber, mineral oil (kerosene), silica sand, steel, hand towels, steel tubing, yellow ochre, and zinc dust and oxide at Navy Yard, Norfolk. Apply for proposals to supply officer, Navy Yard, Norfolk, or to Bureau.

Turntable (Garage).—M. Mortenson, Fairfax, Okla.—Garage turntable.

Veneer and Box Machinery.—Queen City Box Co., Maurice H. Tripp, Mgr., Charleston, Miss.—Veneer and box factory machinery; also about 150 second-hand light dry kiln trucks, about 6 ft. long, made of 4-in. channel.

Water Heater.—J. D. Barnes, Chrmn. Building Com., First Baptist Church Cleveland, Tenn.—Prices on coal hot-water heater for \$20,000 church.

Woodworking Machinery.—J. C. Miller, Campbellsville, Ky.—Woodworking machinery for furniture and cabinet work.

Wrench Manufacturing.—Arkansas Lime Co., Ruddells, Ark.—To contract for manufacture of patent wrench; lots of 10,000.

RAILROAD CONSTRUCTION

RAILWAYS

Ark., Newport.—Missouri Pacific Railway, it is reported, will soon begin work on \$1,000,000 of improvements along the White River line of the St. Louis, Iron Mountain & Southern Railroad. E. A. Hadley, St. Louis, Mo., is Chief Engr.

Ark., Rogers.—Ozark & Arkansas Midland Ry. Co., capital stock \$750,000, of which \$200,000 is subscribed, is chartered to build a line from Rogers to Kingstons (about 40 mi.), and Bald Knob, Ark., about 125 mi. farther. Ozark Land & Timber Co.'s line, 8 mi. long, from Monte Ne to Piney, Ark., will be taken over. Directors include G. G. Wright, C. M. Miller, L. B. Smith, Towne Young and R. F. Henderson, all of Dallas, Tex.; G. G. Wright, Jr., Senator John R. Duty, Dr. G. M. Love, Lee M. Harris and W. A. Mundell of Rogers, Ark., and C. P. Hummel of Monte Ne, Ark.

Fla., Miami.—The press report that the Florida East Coast Ry. would build tracks on the north bank of the West Palm Beach Canal is denied by the company.

Ga., Bolinbroke.—Branch line from Holton to connect with Central of Georgia Ry. near Bolinbroke, 5½ mi. will, it is reported, be constructed by the Preston-Small Construction Co. of Macon, Ga., of which C. M. Preston is President. It will reach a quarry at Holton.

Ga., St. Mary's.—American Pine & Cypress Co. will build 3 mi. lumber railroad in connection with lumber plant to be established on St. Mary's River near St. Mary's. Leland D. Cox, 603-618 Atlantic National Bank Bldg., Jacksonville, Fla., is Prest.

Ky., East Bernstadt.—An extension of the Bond-Foley Lumber Co.'s railroad is to be built to a point beyond McKee, Ky. Address Bond, Ky.

La., Kenner.—Orleans-Kenner Electric Railway Co., which has built an extension from Kenner to the boundary of St. Charles Parish, 2 mi., proposes to continue construction 6 mi. farther. Johnson & Co., Inc., New Orleans, is contractor. H. K. Johnson, 409 Tulane-Newcomb Bldg., New Orleans, is Chief Engr.

La., Longleaf.—Peavy-Wilson Lumber Co. of Shreveport, La., is organized, capital stock \$1,000,000, and proposes to build a railroad from Longleaf to connect with the Kansas City Southern R. R. near Christie, La., 53 or 60 mi. A. J. Peavy of Shreveport is Prest.; R. J. Wilson, V.-P., and John S. Welsh, Secy.-Treas.

Miss., Meridian.—Meridian & Bigbee Ry. Co. has published charter to succeed the Meridian & Deepwater R. R. Co., and proposes to build the projected line from Meridian, Miss., to Myrtlewood, Ala., about 47 mi., but also plans to later construct extension from there to Pensacola, Fla., about 130 mi. S. A. Neville of Meridian, John T. Schley of Mobile and others interested in the Meridian & Memphis R. R. are the incorporators. Construction is expected to begin soon to Myrtlewood, on the Tombigbee River.

Miss., Vicksburg.—Illinois Central Railroad will raise the tracks of the Silver Creek branch of the Yazoo & Mississippi Valley Railroad to prevent trouble from high water. A. S. Baldwin, Chicago, Ill., is Ch. Engr.

Mo., Monroe City.—Chicago, Burlington & Quincy Railroad Co. is authorized by the Missouri Public Service Commission to build its proposed line from Monroe City to Moberly, Mo., 35 mi. W. L. Breckinridge, Chicago, Ill., is Chief Engr. Maint. of Way.

N. C., Winston-Salem.—Winston-Salem Southbound Ry. is constructing a spur track about 2 mi. long from South Winston-Salem to the George E. Nissen Co.'s wagon works. Shore Transfer Co. of Winston-Salem is the contractor.

Okla., Ardmore.—Gulf, Colorado & Santa Fe Ry. is reported surveying from near Ardmore to the new oil fields at and around Wirt, Okla., about 20 mi. F. Merritt, Galveston, Tex., is Ch. Engr.

Okla., Bartlesville.—S. Stephenson Sons & Co. of New Haven, Conn., have sublet contract to the Railroad Construction Co., 1 Union Square, New York, for building the proposed Kansas & Oklahoma Southern Ry. from Caney, Kans., to Fort Smith, Ark., about 165 mi.

Okla., Forgan.—The Colorado, Kansas & Oklahoma R. R. Co. does not contemplate any construction next year. This refers to a current report that it might extend from Scott City, Kans., to Forgan, Okla.

Okla., Ringling.—J. J. Harrison of Ardmore, is making survey for the Ringling & Oil Fields Railroad, which is to be built from Ringling north to Oklahoma City by J. L. Hamon of Lawton, Okla.; John Ringling of Chicago, and others. (See Manufacturers Record Dec. 7.)

Okla., Antlers.—Concerning the recent press report that the Ingham Lumber Co., Oklahoma City, would build a railroad east

from Antlers, Okla. Prest. S. K. Ingham says construction will not begin for three years and it is not decided where it will start.

Okla., Hugo.—At a mass-meeting Dec. 11 large subscriptions were made to stock of the proposed Hugo & Oklahoma R. R. to connect with the Santa Fe system at Atoka, 82 mi. northwest. Nearly all right of way secured. Construction expected to start in Jan. Chamber of Commerce, Ben C. Eastin, Secy., and others interested.

Okla., Warner.—Webbers Falls R. R. Co. proposes to build next year an extension from Warner to Checotah, Okla., 15 mi. V. H. Smith, Okmulgee, Okla., is Freight Traffic Mgr.

Tenn., Collinwood.—Construction of the projected Wayne-Hardin R. R. from Collinwood to Savannah, Tenn., 40 mi., is expected to begin about Jan. 1. E. H. Steinman of Collinwood is reported elected Prest. and John H. DeWitt of Nashville, Tenn., Secy. and Gen. Counsel.

Tenn., Knoxville.—Southern Ry. has bought land 4 mi. east of Knoxville for the reported purpose of building a cut-off or belt line from the Coster Yards to Mascot, Tenn. W. H. Wells, Washington, D. C., is Ch. Engr. of Constr.

Tex., Beeville.—R. H. Phillips of St. Louis, Mo., is reported saying that financing is assured for the proposed Eagle Pass & Gulf Railroad which is to be constructed from Eagle Pass to Aransas Pass, Tex., via Beeville and other points. Contract for the first 100 mi. of line is to be let soon. C. R. Wild of Cincinnati, and Cyrus E. Hamon of St. Louis are also mentioned as interested.

Tex., Roby.—Roby & Northern R. R. Co. proposes to build an extension from Roby to Sweetwater, Tex., 23 mi.; also from North Roby to Double Mountain City, 15 mi. It is further contemplated to continue construction from Double Mountain City to a connection with the Stamford & Northwestern Ry., 15 mi. more. L. C. Eastland is V.-P. and Gen. Mgr.

Tex., Lubbock.—Construction is reported begun on the Lubbock & Great Northern Railroad, from Lubbock to Hollis, Okla., about 175 mi. J. M. Elliott, Memphis, Tex., is Prest.

Va., Newport News.—Construction of the Newport News-Washington Short Line Ry. is to start about Dec. 18 near Grafton, York County, Va., according to local announcement. Channing M. Ward, Virginia Passenger & Power Bldg., Richmond, Va., is Ch. Engr.

Va., Richmond.—Atlantic Coast Line Railroad plans improvements in the vicinity of the Byrd Street Station in Richmond, to cost about \$500,000. J. E. Willoughby is Chief Engr. at Wilmington, N. C.

Va., Saltville.—The Mathieson Alkali Works of Saltville are reported contemplating construction of a railroad from near there to Mendota, Va., about 30 mi., to obtain direct railroad communication with the coal fields. It is said that the Vaughan Construction Co. of Roanoke will build the line.

STREET RAILWAYS

Tex., Greenville.—Mineral Heights Street Railway Co. of Greenville is chartered. Capital stock, \$3000. Incorporators: J. A. Phillips, J. M. Massey and W. T. Wright.

New Edition Dockman's Textile Directory.

The twenty-fifth edition of Dockman's American Textile Report and Directory of the United States and Canada is now being distributed by the Dockham Publishing Co., 6 Beacon St., Boston, Mass. This edition marks the fiftieth anniversary of the company in publishing a directory of the textile industry. The directory includes a complete list of textile manufacturers alphabetically arranged, statistics of cotton looms and spindles and wool and worsted looms and spindles for the United States, the listing by States of textile manufacturers, including cotton, woolen, worsted, knit goods, silk, flax and linen manufacturers and giving condensed information about each; complete lists of print works, bleacheries and dyers and finishers; the agencies and offices of manufacturing companies; dry goods, commercial and manufacturing agents; cotton goods converters; importers, exporters, brokers, jobbers, yarn dealers, cotton dealers, wool dealers, textile associations and directors of many of the leading incorporated companies.

INDUSTRIAL NEWS OF INTEREST

New Branch Factory.

On account of rapidly increasing business the Ransome Concrete Machinery Co. of Danellon, N. J., has just opened another factory at Reading, Pa. This will double the output of the company in the line of small mixers and road-paving machinery.

New Grease Remover and Polishing Material.

"Pontoklene," an automobile polisher and grease and tar remover, is the name of a new product just put on the market by the Du Pont Co. of Wilmington, Del. Automobile men are said to be finding it a cleanser that removes tar, grease and dirt with ease and polishes with practically no rubbing. Furniture can also be cleaned and polished with Pontoklene.

Rejoins Corbin Screw Corp. Sales Force.

N. B. Ford, who for ten years traveled for the Corbin Screw Corporation from its Chicago office, having his headquarters in Kansas City, and who left some years ago to become connected with the Ford Chain Block & Manufacturing Co. of Philadelphia, has re-entered the employ of the Corbin Screw Corporation as salesman, with headquarters in New Britain, Conn., and covering the territory formerly traveled by A. H. Harrop.

Now Make Metal Doors.

The Cincinnati Manufacturing Co. of Cincinnati, Ohio, has recently purchased the metal door manufacturing department of the Kinnear & Gager Manufacturing Co. of Columbus, Ohio. The purchase includes all of the machinery, equipment and good will. The plant is being moved to Cincinnati where it will be combined with the ornamental iron and bronze business of the Cincinnati Manufacturing Co. The metal doors are a high-class product bearing the Underwriters' label.

Paving Equipment for Cuba.

What is reported to be one of the largest single shipments of paving equipment on record is that made to Torrance & Portal of Havana, Cuba, who have secured extensive paving contracts in Havana and Cienfuegos. The shipment made by the Iroquois Works of The Barber Asphalt Paving Company, Philadelphia, Pa., consisted of six cars routed by way of Key West, Fla., carrying two 3-unit asphalt plants, two 2000-gallon and one 1000-gallon steam-heated melting kettles, four tandem rollers, two portable boilers and engines, fire wagons, paving tools, etc. Contracts already secured by the Havana firm for paving, in which Trinidad lake asphalt will be used, total about 400,000 square yards. One of the Iroquois plants is to be located at Havana and the other at Cienfuegos.

Sale of Cotton Mill Property.

On January 15, 1917, the entire property of the Orangeburg (S. C.) Manufacturing Company, a going concern, will be sold at auction. The sale includes all rights, franchises and privileges of the company, lands, mills, powerhouses, warehouses, dwellings and all other buildings and equipment of looms, engines, boilers, dynamos, electric appliances, etc., as utilized in the manufacture of cotton products. For information regarding terms of sale, etc., address E. F. Verdery and B. H. Moss, receivers, Orangeburg, S. C., or T. Moultrie Mordecai and William Elliott, attorneys for receivers, Charleston, S. C.

Managerial Change.

Southern office, located at Chattanooga, Tenn., of the Norton Company, manufacturer of grinding wheels at Worcester, Mass., changes management on January 1. M. A. Williamson has been in charge, but will be succeeded by C. Brown, formerly of Worcester. Mr. Williamson has resigned to take up the business management of the Journal of Industry and Engineering Chemistry, which is to be edited after the first of the year by Dr. Chas. Herty, president of the American Chemical Society, and under the auspices of which the Journal is conducted. Both Dr. Herty and Mr. Williamson will have their offices in New York, where the paper is published.

Pleased With Baker Scrapers.

An outfit of Baker-Maney four-wheel scrapers, built by the Baker Manufacturing Co., manufacturer and distributor of road machinery, Springfield, Ill., has been sold to the

Memphis (Tenn.) Asphalt & Paving Co., for use on its Greenwood (Miss.) paving work. This concern is reported as being very well pleased with the machines, having found them especially well adapted to excavating on paving work. Other prominent concerns in the South which have purchased Baker road machinery are the Carey-Reed Construction Co. and the Phelps-Post-Guyon Co., both of Lexington, Ky., and Betts & Boice of Harrisonburg, Va. Baker-Maney scrapers and other road equipment are described and illustrated in catalogues issued by the company.

Installing Large Gas Engine.

The C. & G. Cooper Company of Mt. Vernon, Ohio, has recently taken orders for a number of its large gas engines. Among them are the following: Two 450 B. H. P. single tandem engines to the American Zinc, Lead & Smelting Co. for installation at Caney, Kans.; one 360 B. H. P. twin tandem to the B. B. Stroud Company, Bradford, Pa.; one 550 B. H. P. single tandem to the Charles Boldt Company, Huntington, W. Va.; three 450 B. H. P. single tandems to the Columbia Gas & Electric Co., Cincinnati, Ohio; two 360 B. H. P. twin tandems to the United Fuel Gas Co., Charleston, W. Va.; one 1150 B. H. P. twin tandem to the National Carbon Co. for installation in their Clarksburg, W. Va., plant; one 150 B. H. P. duplex engine to the Moores & Ross Milk Co., Columbus, Ohio, for direct driving ammonia compressor cylinders, and the company has recently placed in operation two 450 B. H. P. engines in the compressor station of the Berea Pipe Line Co., Berea, Ohio.

Changes in Executive Force.

Effective December 1, a change was made in the officers of the Buckeye Iron and Brass Works, Dayton, Ohio, by the complete withdrawal of Edward G. Pease, former president. He has been succeeded in that office by W. B. Anderson, who for many years was the secretary and treasurer. Other officers are: Robert C. Anderson, vice-president; Wm. P. Huffman, secretary and treasurer; George W. Brunette, assistant secretary and treasurer; George J. Sauer, general superintendent. The company will continue its work with increased aggressiveness in the manufacture of machinery for extracting oil from cotton seed and linseed, one of the shipments for the latter comprising a 12-press outfit sent to Sydney, N. S. W. Beyond these the company has been studying the extraction of coconut oil, and has perfected a line of machinery for that purpose. One order running to \$100,000 was placed with them by the Coconut Products Co. of New York for machinery for a plant building at Baltimore; another equipment for a 12-press mill has been supplied to the Procter & Gamble Company at Port Ivory, Staten Island, while a 24-press mill has been sold in the Philippine Islands. In each case the plants for the production of coconut oil were furnished complete.

Increase Wages 20 Per Cent.

Two thousand employees of the Arlington Company, a du Pont subsidiary, have been granted an increase in pay in the form of a 20 per cent. bonus, giving an increase to the workers of \$384,000, or \$32,000 a month, out of which to meet the increased cost of living. The Arlington Company, which produces Ivory Pyralin toilet ware and novelties, waterproof collars and cuffs, sheeting and other articles into the manufacture of which nitro-cellulose enters, has adopted the liberal bonus plan of the parent du Pont company, and the awards are made applicable to both wage-earners and salaried employees without regard to length of service. The bonus comes at the close of the first year's business under the new ownership. During the time many new employees have been added, the plant has been developed along broader lines, and its increase in production has been almost spectacular. The company's plant is at Arlington, N. J., with offices at 725-727 Broadway, New York City, and branch offices in many cities. It was established in 1883, and was taken over by the du Pont interests a year ago. It affords one of the du Pont company's many outlets for the cotton cellulose which enters largely into the making of smokeless powder, and of which the du Pont company is the largest producer in the world. Recently the pyralin plant has been using more than 15,000 pounds of cotton paper a day, and the rate of consumption is increasing rapidly.

TRADE LITERATURE

"The Proper Oil for Treating Creosoted Wood Paving Blocks."

Under the above title a paper, which was read before the recent meeting of the American Society of Municipal Improvements by P. C. Reilly of the Republic Creosoting Co., Indianapolis, Ind., has been published in pamphlet form.

Electric Railway Line Material.

Direct suspension materials for electric railway lines are illustrated and described in catalogue 44004-A, issued by the General Electric Company, Schenectady, N. Y. The products listed include pole brackets of several designs, clamps and bands, suspensions of all kinds, ears for round, grooved and figure 8 wire, strain insulators, soldered and mechanical splicing sleeves, turnbuckles, trolley frogs, trolley crossings, section insulators and switches, feeder insulators, anchor rods and anchors.

"Ingersoll-Rogier" Compressors.

Class "ER 1" Ingersoll-Rogier power-driven single-stage straight-line air compressors, manufactured by the Ingersoll-Rand Company, 11 Broadway, New York, are illustrated and described in Bulletin No. 3139. A general description of the compressor's operation and construction is given in the bulletin, together with illustrations with descriptive outline of its essential parts, such as main frame, air cylinder, inlet and discharge valves, piston, piston rod and cross head, connecting rod, crank, shaft and fly wheels, and a sectional view showing the method of holding inlet valve in the cylinder barrel.

Bulletins on Water Purification.

The Richmond Water Softener Co., Richmond, Ind., has issued a series of bulletins describing its water purifying, softening and filtering system. These bulletins describe the analysis of the water and the local conditions surrounding the plant, mention the purity of the feed water and its relation to boiler scale and fuel consumption, explain the features of the new filter and its easy cleaning, and speak of the elimination of carbonic acid gas in the manufacture of ice. The bulletins are intended for distribution among industrial concerns requiring pure water, and will be mailed on request.

Hose and Hose Couplings.

Bulletins Nos. 129 and E-45, issued by the Chicago Pneumatic Tool Co., Fisher Building, Chicago, describe and illustrate, respectively, its large line of hose, hose couplings, hose clamp tools and appliances for pneumatic machines, and Duntley portable electric hoists, manufactured by the company. Chicago hose couplings are made of bronze, corrosion proof, and are claimed to be absolutely tight. The Duntley electric hoists are said to fulfill the requirements of rapidity of operation and ease of control, while consuming an insignificant amount of energy, and are in successful operation in newspaper offices, foundries, machine shops, etc.

Packard Lubricating Chart.

More important, possibly, than any other one thing in the care of automobiles is lubrication. To bring this forcibly to the attention and keep it before the drivers of Packard cars so that there will be no excuse for failure to keep the mechanism properly lubricated, the Packard Motor Car Company of Detroit furnishes a large wall chart to each purchaser of its new model "Twin 6," which is intended to be placed in the garage or other conspicuous place where persons in charge of the care of the car may be constantly reminded of the proper time to lubricate and the character of lubricant to use for the various parts.

Standard Scales.

Scales for every purpose are illustrated and described in a folder issued by the Standard Scale & Supply Co., 1631 Liberty Ave., Pittsburgh, Pa. Some of the special types made are "The Standard" grain hopper scales, "Monitor" rolling mill scales, "The Standard" auto truck scales, coal dealers' scales, automatic dial scales, textile scales and portable platform scales of many designs. In fact, with over 142 different types of scales listed in the folder, the company states it makes a number of special scales which are not included in that number. Hand trucks and concrete and other mixers are also manufactured by the Standard Scale & Supply Co.

FINANCIAL NEWS

FINANCIAL CORPORATIONS

Ala., Birmingham.—Industrial Loan & Savings Co. has begun business; capital \$500,000. B. M. Allen is Pres.; D. J. Poncelor, V.-P. and Gen. Mgr., and Lawson E. Gambill, Secy. and Treas.

Ala., Huntsville.—Farmers' State Bank is organized with \$50,000 capital. Mayor Thomas T. Terry will be Pres. Among the stockholders are Dr. O. J. Brooks, C. E. Baxter, J. T. Clift and A. J. Moore.

Ark., Blytheville.—First National Bank of Blytheville, to succeed the Farmers' Bank of Blytheville, is chartered; capital \$50,000.

Ga., Cuthbert.—Georgia Bank & Trust Co., capital \$50,000, has made application for charter. Incprts.: F. H. Davis, W. J. Wade, P. M. Reid, L. L. Martin, all of Cuthbert, and J. W. Andrews of Carnegie and W. D. Hammack of Coleman.

Ga., Macon.—The American National Bank has changed its name to Citizens' & Southern Bank of Macon, and is now a State institution. Capital has been increased from \$500,000 to \$1,000,000. Mills B. Lane, Pres., will continue in that office; George Clarke, V.-P., and E. C. Scott, Cashr. Mr. Lane is also Pres. of the Citizens' and Southern Bank in Savannah and of the Citizens' and Southern Bank of Augusta.

La., Baton Rouge.—Mercantile Bank, which is to absorb the Capital City Bank, is organized with \$100,000 capital. Captain O. R. Steele, Pres.; J. B. Ferguson, Sr., V.-P. Business is to begin about Jan. 1.

Md., Govans.—Homeland Permanent Building Association is incptd.; J. George Kaestner, Pres.; J. Grason Wisner, V.-P.; Guy M. Stricklen, Secy.; H. Warfield Dorsey, Treas.

Miss., Wiggins.—Bank of Wiggins, capital \$10,000, has begun business. Dr. S. E. Dunlap, Wiggins, Pres.; Frank W. Foote, V.-P., and Murphy E. Cooper, Cashier, both of Hattiesburg. Business began Dec. 3.

N. C., Indian Trail.—A new bank is reported being organized. Capt. W. L. Howie is said to be interested.

N. C., Dobson.—Surry Land & Loan Co. incptd., capital \$10,000. N. J. Martin, Pres.; D. W. Hemmings, V.-P.; R. C. Lewellyn, Treas., and R. A. Freeman, Secy. Business is to begin immediately.

N. C., Wendell.—Farmers and Merchants' Bank, capital \$50,000, is incptd. by M. A. Griffin, B. D. Honeycutt, J. W. Stell, J. G. Jacobs and others.

S. C., Anderson.—Palmetto Joint Stock & Investment Association is commissioned; capital \$4000. Petitioners: Willie Todd, N. A. Jenkins, J. D. Day and R. H. Groves.

S. C., Charleston.—Civic Building and Loan Association is chartered; capital \$150,000. R. G. Rhett, Pres.; G. B. Buell, V.-P., and T. T. Hyde, Secy. and Treas.

Tenn., Chattanooga.—Union Bank & Trust Co., capital \$50,000, is being organized by H. A. Clark, J. T. Ledford, F. F. Herndon, Thomas Allen and L. D. Miller.

Tex., Channing.—First State Bank of Channing has been converted into the First National Bank; capital \$25,000.

Tex., Channing.—First National Bank, a conversion of the First State Bank, has made application for charter; capital \$25,000.

Tex., Lamkin.—First State Bank of Lamkin is authorized to do business; capital \$10,000. W. T. Hayes is Pres.

Tex., Redwater.—Citizens' Guaranty State Bank is authorized to do business; capital \$10,000. E. T. Page is Pres.

Tex., Texarkana.—Guaranty State Bank of Texarkana, succeeding the City National Bank is chartered; capital \$50,000; J. W. Orr, Pres.; John P. McShane, 1st V.-P.; N. A. Shaw, 2d V.-P.; E. D. Trigg, Cashier. Business began Dec. 4.

Va., Waverly.—First National Bank, chartered; capital \$25,000. J. E. Wilcox, Pres.; Geo. H. Blood, V.-P.; W. M. Land, Cashier; R. Wallace Chappell, Asst. Cashier. Business has begun.

NEW SECURITIES

Ala., Talladega.—(Road).—\$300,000 of Talladega County bonds defeated.

Fla., Fort Lauderdale.—(School).—Bids will be received until 2 P. M. Jan. 2 for \$30,000 of 6 per cent. \$1000 denomination bonds Dania Special Tax School Dist. 4, Broward County, dated August 1, 1916; maturity \$1000 August 1, 1921, and \$1000 annually thereafter. Address Board of Public Instruction, Broward County, J. M. Holding, Secy.

Merchants-Mechanics First National Bank

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SURPLUS AND UNDIVIDED PROFITS. 2,189,000
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TOLEDO, OHIO

Fla., Fort Pierce—(School).—Vero School Dist., St. Lucie County, is taking steps to call an election to vote on \$40,000 of bonds. Address County Commrs.

Fla., Key West—(Road).—Nothing definite has been decided as yet regarding proposed bond issue. J. D. Curry, Jr., is Chrmn. Board County Commrs. Monroe County.

Fla., Quincy—(Bridge).—Gadsden County bonds are voted. Address County Commrs.

Fla., Miami—(Improvement).—\$600,000 of 5 per cent. Dade County causeway bonds have been purchased at \$627,484 by the Miami Savings Bank.

Fla., Plant City—(Water, Refunding).—Steps are being taken to call an election to vote on \$15,000 water-works and \$25,000 of refunding bonds. Address The Mayor.

Fla., Sanford—(Refunding).—\$45,000 of 5½ per cent. 30-year \$1000 denomination bonds have been purchased at \$3952 premium by Field Richards & Co., Cincinnati, Ohio.

Fla., West Palm Beach—(School).—Bids will be received until noon Dec. 28 for \$8000 of 6 per cent bonds Special Tax School Dist. No. 9, Palm Beach County. Denominations \$100 and \$500. Dated Dec. 1, 1916. Maturity Dec. 1, 1918 to 1952, inclusive. H. W. Lewis is Supt. Public Instruction.

Fla., West Palm Beach—(School).—Bids will be received until noon Dec. 28 for \$25,000 of 6 per cent. \$500 denomination bonds Special Tax School Dist. No. 1, Palm Beach County, dated Dec. 1, 1916; maturity Dec. 1, 1919 to 1938, inclusive. H. W. Lewis is Supt. Public Instruction.

Ga., Americus—(School).—\$20,000 bonds have been sold. Walter E. Steed, Butler, Ga., is Chrmn. Bd. of Trustees.

Ga., Cave Springs—(Water-works).—\$20,000

of bonds have been purchased by J. B. McCrary & Co., Atlanta, Ga.

Ga., Commerce—(Light).—\$10,000 of 5 per cent. \$500 denomination bonds have been purchased at \$10,472.39 by Northeastern Banking Co., Commerce, Ga. Dated Jan. 1, 1917; maturity Jan. 1, 1918, to Jan. 1, 1927. C. A. Goodwin is Clk. and Treas.

Ga., Damascus.—Bids will be received until 11 A. M. Dec. 15 by J. D. Haddock, Mayor (P. O. Blakely), for \$10,000 of 5 per cent. light and water bonds.

Ga., Ellaville—(School).—Election is to be held December 18 to vote on \$12,000 of bonds. Rogers Williams is Secy. School Board.

Ga., Lithonia—(Water, Sewer).—\$20,000 water-works and \$15,000 sewer 5 per cent. 30-year bonds have been purchased at a premium by Robinson-Humphrey-Wardlaw Co., Atlanta, Ga.

Ky., Earlinton—(Construction and Reconstruction).—\$15,000 of bonds are voted. Address The Mayor.

Ky., Murray—(Water-works Improvement). Bids will be received until noon Jan. 15 by C. M. Smoot, City Clk., for \$20,000 of 5 per cent. 20-year \$500 denomination bonds, dated April 1, 1917. Further particulars will be found in the advertising columns.

Ky., Richmond—(Road, Bridge).—\$35,000 of Madison County bridge bonds are voted. It is expected that it will be some time before the Madison County Fiscal Court will be ready to issue and sell the bonds. J. G. Baxter is County Judge.

La., Donaldsonville—(Levee).—Bids will be received until 11 A. M. Jan. 11 for \$250,000 of 5 per cent. bonds Lafourche Basin Levee Dist. John F. Truxillo is Asst. Secy. Board of Commrs. Further particulars will be found in the advertising columns.

La., Montegut—(School).—Bids will be received until 11 A. M. Jan. 2 by A. R. Viguier, Prest. Subdist. No. 1 of School Dist. No. 1, Terrebonne Parish, for \$10,000 of 5 per cent. \$500 denomination school bonds maturing 1917 to 1931, inclusive.

Miss., Aberdeen—(Road).—Notice is given that Suprs. Dist. No. 3 (Hamilton Road Dist.), Monroe County, proposes in January to issue and sell bonds. G. G. Ray is Clerk Board of Suprs., Monroe County.

Miss., Greenville—(Road).—Bids will be received until 10 A. M., Dec. 22, for \$50,000 of \$1000 denomination bonds of Washington County, interest not to exceed 5 per cent. Dated Nov. 6, 1916; maturity 1918 to 1941, inclusive. E. W. Wood is Chrmn Highway Commrs., Washington County.

Miss., Meridian—(Street).—Within 60 days street paving and sidewalk certificates will be for sale. J. W. Parker is Mayor.

Miss., Monticello—(Road).—Taxpayers of Beat 1, Lawrence County, have voted to organize into a separate road district and will issue bonds. Address Board of Suprs.

Miss., New Augusta—(Road).—\$200,000 of Perry County bonds have been sold to a Toledo (O.) firm. Address Board of Suprs.

Miss., Wiggins—(Road).—\$25,000 of Stone County bonds have been sold to J. C. Mayer & Co., Cincinnati, O., at a premium of \$375.

Mo., Eldorado Springs—(Water-works).—\$20,000 of 5 per cent. 20-year \$500 denomination bonds have been purchased at par, accrued interest and \$1120 premium by Little & Hays, St. Louis.

Mo., Liberty—(Road).—\$1,250,000 of 4½ per cent. 20-year \$100 and \$1000 denomination Clay County bonds are voted. Date for opening bids not yet decided, as issue is held up by injunction. Edgar Archer is County Clerk.

Mo., St. Louis—(School).—Bids will be received until 2 P. M. Dec. 28 for \$1,000,000 of 4 per cent. 20-year bonds, being part of a total issue of \$3,000,000 voted in November; dated Jan. 1, 1917. Address Board of Education, Chas. P. Mason, Secy. and Treas.

N. C., Asheville—(School).—\$12,000 of West Buncombe Dist., Buncombe County, high school bonds have been sold at 101 and accrued interest. Address County Bd. of Education.

N. C., Franklin—(Road).—Election is to be held in Cowee Township, Macon County, Jan. 15, to vote on bonds. Elmer Johnson is Clerk Board of County Commrs.

N. C., Hendersonville—(Drainage).—\$15,000 of bonds for dredging Mud Creek Valley have been sold by the Henderson County Drainage Commission.

N. C., Jackson—(School).—Northampton County 6 per cent. bonds have been sold as follows: Woodland Dist. \$10,000 at \$76 premium to Durfee, Niles & Co., Toledo, Ohio; Milwaukee Dist. \$3000 at \$55 premium to Powell, Garard & Co., Chicago.

N. C., Taylorsville—(Road).—\$150,000 of 5 per cent. 40-year \$1000 denomination Alexander County bonds have been purchased at par and \$7350 premium by Sidney Spitzer & Co., Toledo, O.

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Okla., Bartlesville—(Road).—\$600,000 of Washington County bonds defeated.

Okla., Henryetta—(School).—Election will probably soon be called to vote on \$35,000 of Henryetta School Dist., Okmulgee County, bonds. Address Board of Trustees.

Okla., Mountain Park—(Electric Wiring).—\$100 of bonds have been purchased at 97½ by J. H. McMahan, Oklahoma City.

Okla., Tahlequah—(Bridge).—Election is to be held in Cherokee County Dec. 22 to vote on \$100,000 of bonds. Address County Commrs.

Okla., Woodward—(City Hall).—Bids will be received until 5 P. M. Dec. 18 for \$50,000 of 5 per cent. 25-year \$1000 denomination city hall bonds. H. H. Alexander is City Clerk.

Tenn., Chattanooga—(Bridge).—\$250,000 of additional bridge bonds will probably be issued by Hamilton County. Address County Commrs.

Tenn., Hohenwald—(Road).—\$100,000 of Lewis County bonds are voted. Address County Commrs.

Tenn., Hohenwald—(Road).—\$100,000 of 5 per cent. 40-year Lewis County bonds are voted. County Court will decide first Monday in Jan. when bonds are to be sold. Address J. B. Dabbs.

Tenn., Knoxville—(Street, Water-works).—\$28,689 of 6 per cent. 5-year bonds have been

purchased at \$1125 premium by Seasongood & Mayer, Cincinnati.

Tex., Austin.—Bonds approved by Atty.-Gen.: \$500 of 5 per cent. Saspamco Independent School Dist., Wilson County; \$16,000 of 5 per cent. 10-40-year Iowa Park Independent School Dist.; \$2000 of 3 per cent. 20-year Common School Dist. 13, Guadalupe County; \$12,000 Rusk Independent School Dist.

Tex., Bonham—(Road).—Bids will be opened Dec. 18 for the following 5 per cent. 10-40-year Fannin County bonds, dated Oct. 15, 1916: \$35,000 of Dist. 12, denomination \$100; \$25,000 Dist. 14, denomination \$1000; \$125,000 Dist. 3, denomination \$1000. S. F. Leslie is County Judge and Will Harkins, County Auditor.

Tex., Brenham—(School).—Election is to be held in Washington County Dec. 30 to vote on 5 per cent. 10-year bonds. Amount not stated. W. R. Ewing is County Judge.

Tex., Brownwood—(City Hall, Fire Station, School).—Election is to be held in Jan. to vote on \$110,000 of school, fire station and city hall bonds. Address The Mayor.

Tex., Columbus—(Road).—Election is to be held in Colorado County to vote on \$100,000 of bonds. Address County Commrs.

Tex., El Paso—(Courthouse).—\$450,000 of bonds are voted for purpose of taking up

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REORGANIZATION OF

PERE MARQUETTE RAILROAD COMPANY

To Holders of Certificates of Deposit for Refunding Mortgage Four Per Cent. Bonds issued under the Agreement dated April 8, 1912.

The Reorganization Managers under the Plan and Agreement of Reorganization dated October 30, 1916, have announced that more than 91% of the Refunding Mortgage Four Per Cent. Bonds are subject to the said Plan and Agreement and have extended until the close of business on **DECEMBER 16, 1916**, the time within which holders of Certificates of Deposit for said bonds may make payments and receive Subscription Warrants as provided in said Plan and Agreement.

The undersigned Committee desires to call to your attention that at prevailing market prices the **MINIMUM RIGHT OF PURCHASE** accorded under the said Plan and Agreement to depositors of Refunding Mortgage Bonds has a **CONSIDERABLE CASH VALUE** and therefore to the extent that holders do not avail themselves of such rights they should dispose of the same in the market **BEFORE THEY BECOME VALUELESS** through the expiration of the time within which such rights may be exercised.

Dated, New York, December 8, 1916.

FREDERICK STRAUSS, Chairman,
GORDON ABBOTT,
FRANKLIN Q. BROWN,
F. N. B. CLOSE,
COLGATE HOYT,
F. J. LISMAN.

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We handle all detail involved in preparing the necessary legal papers, printing the bonds, certifying as to their genuineness and payment of principal and interest as they mature.

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OF BALTIMORE

A. H. S. POST, President

F. G. BOYCE, Jr., Vice-President

REORGANIZATION OF Pere Marquette Railroad Company

Announcement is made that securities have been subjected to the Plan and Agreement of Reorganization dated October 30, 1916, to approximately the following amounts, viz.:

\$3,765,000 FLINT & PERE MARQUETTE 6s	more than 94% of the amount outstanding;
\$983,000 FLINT & PERE MARQUETTE 4s	more than 98% of the amount outstanding;
\$359,000 FLINT & PERE MARQUETTE TOLEDO DIVISION 5s	more than 90% of the amount outstanding;
\$3,003,000 FLINT & PERE MARQUETTE PORT HURON DIVISION 5s	more than 90% of the amount outstanding;
\$2,797,000 FLINT & PERE MARQUETTE CONSOLIDATED 5s	more than 98% of the amount outstanding;
\$5,477,000 CHICAGO & WEST MICHIGAN 5s	more than 95% of the amount outstanding;
\$1,594,000 CHICAGO & NORTH MICHIGAN 5s	more than 95% of the amount outstanding;
\$5,114,000 DETROIT, GRAND RAPIDS & WESTERN 4s	more than 95% of the amount outstanding;
\$638,000 PERE MARQUETTE OF INDIANA 4s	more than 94% of the amount outstanding;
\$1,000,000 SAGINAW, TUSCOLA & HURON 4s	100% of the amount outstanding;
\$12,774,000 PERE MARQUETTE REFUNDING 4s	more than 91% of the amount outstanding;
\$1,200,000 PERE MARQUETTE SHORT TERM 6% NOTES	100% of the amount outstanding;
\$7,443,000 PERE MARQUETTE 6% COLLATERAL TRUST NOTES	more than 93% of the amount outstanding;
\$3,296,000 PERE MARQUETTE 6% FIVE YEAR DEBENTURES	more than 65% of the amount outstanding;
\$18,209,000 PERE MARQUETTE PREFERRED AND COMMON STOCKS	more than 69% of the amount outstanding;

The time for holders of Certificates of Deposit for PERE MARQUETTE CONSOLIDATED MORTGAGE 4% BONDS to dissent from the Plan has not yet expired, but there are on deposit \$8,213,000 of said bonds, more than 98% of the amount outstanding, in respect of which no such dissent has been filed.

In view of the large deposits under the Plan and Agreement and to afford all classes of security holders full opportunity to obtain the benefits thereof, the Reorganization Managers have extended the time for deposits, for making payments, and for delivery of Application Certificates under the Plan and Agreement until the close of business on **DECEMBER 16, 1916**, and the time for filing Application Forms and making the required payments in respect thereof until the close of business on **DECEMBER 29, 1916**. Attention is called to the provisions of the Plan and Agreement whereby the new Prior Preference Stock (trust certificates) and Common Stock (trust certificates) offered to depositors (in respect of which Subscription Warrants shall not have been issued), **MUST** be allotted to holders of Application Certificates making application therefor; after such allotment it will be impossible to permit depositors of REFUNDING MORTGAGE BONDS, COLLATERAL TRUST NOTES, DEBENTURES AND STOCK to obtain Subscription Warrants. As under the Plan and Agreement the only benefit accruing to depositors of COLLATERAL TRUST NOTES, DEBENTURES AND STOCK is the right to purchase New Stock (trust certificates), the holders of such securities are notified that **THEIR RIGHT TO PARTICIPATE IN THE PLAN AND AGREEMENT CEASES AT THE CLOSE OF BUSINESS ON DECEMBER 16, 1916**.

Dated, New York, December 7, 1916.

J. & W. SELIGMAN & CO.
ROBERT WINTHROP & CO.
REORGANIZATION MANAGERS.

EUGENE V. R. THAYER

scrip contracted to be issued for completion of courthouse. Address County Commr.

Tex., Houston Heights—(School).—Steps are being taken to hold an election to vote on bonds. Address Board of Education.

Tex., Houston—(Wharf, Sewage).—Bids will be received until noon Jan. 10 for \$1,235,000 of bonds as follows: \$50,000 of 5 per cent. 40-year sanitary sewage-disposal bonds, dated Sept. 1, 1916, and maturing \$2500 Sept. 1, 1937, and same amount each year thereafter until 1956, inclusive; \$300,000 of 5 per cent. 40-year sanitary sewage-disposal bonds dated Jan. 1, 1917, and maturing \$10,000 Jan. 1, 1922, and same amount each year thereafter until 1957, inclusive, and \$825,000 of 4½ per cent. 40-year bonds dated Jan. 15, 1917, and maturing \$25,000 Jan. 15, 1925, and same amount each year thereafter until 1957, inclusive. Ben Campbell is Mayor. (Recently noted.)

Tex., Lefors—(Road).—\$40,000 Gray County bonds defeated.

Tex., Melon—(School).—\$5000 of bonds are voted. Address Board of Education.

Tex., Pearl—(School).—Bonds for school will probably be issued. Address Board of Education.

Tex., Plainview—(Street, Sidewalk).—Election is soon to be called to vote on bonds. Address The Mayor.

Tex., Quanah—(Warrants).—\$12,500 of 6 per cent. warrants have been purchased by J. L. Arlitt, Austin, Tex.

Tex., San Marcos—(Road).—Election is to be held in Hays County Jan. 6 to vote on \$75,000 of bonds. Address County Commr.

Tex., San Saba—(School).—\$6000 of bonds are to be issued. Address Board of Education.

Tex., Woodboro—(Courthouse).—\$75,000 of bonds are to be issued. Address The Mayor.

Va., Newport News—(School).—\$130,000 of 4½ per cent. \$1000 denomination bonds have been purchased at \$685 premium by Hornblower & Weeks, New York.

Va., Farmville—(City Bonds).—Bids received until Dec. 11 for \$15,000 of 5 per cent. \$500 denomination bonds, maturing 1931. S. W. Paulett is Mayor and Hubert A. Stecker, City Mgr. and Clerk.

Va., Franklin—(Water, Light, Street).—\$40,000 of 5 per cent. 20-year \$500 denomination bonds, dated Feb. 1, 1917, and maturing Feb. 1, 1937, have been purchased by Powell, Garard & Co., Chicago, Ill., at \$40.65 net.

Va., Petersburg—(Sewer, Paving, Water).—Bill has been introduced in the City Council providing for the issuing of \$250,000 of 4½ per cent. bonds. N. T. Patteson is Chrm. Finance Committee.

Va., Salem—(Road).—Election is to be held in Cave Spring Magisterial Dist., Roanoke County, Jan. 16 to vote on bonds, amount not to exceed \$125,000. Address Board of Supvrs., Chas. D. Denit, Clerk.

Va., Wytheville—(School).—Plans are being made to issue bonds for Wythe Dist. Address W. R. Rawlins.

W. Va., Cameron—(Paving, Water, Sewer).—Election is to be called to vote on \$60,000 paving, \$25,000 sewerage and \$10,000 water bonds. Address The Mayor.

W. Va., Fairmont—General Improvement, (Refunding).—\$700,000 4½ per cent. 30-year \$1000 denomination bonds, dated Jan. 1, 1917, are voted. Date for opening bids not yet decided. Address J. Walter Barnes, Commr. of Finance. Albert J. Kern is Clerk.

W. Va., Worth—(School).—Date for receiving bids for \$25,000 of 5 per cent. 10-25-year bonds North Fork Dist., McDowell County, is postponed indefinitely from Dec. 11. A. D. Rice is Pres. Board of Education.

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